

REPORT
ON THE
AGRICULTURAL INSTRUCTION ACT
1917-1918

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OTTAWA, November 30, 1918.

To the Hon. T. A. CRERAR,
Minister of Agriculture,
Ottawa.

SIR,—I have the honour to present herewith my report for the fiscal year ending March 31, 1918, as Commissioner under the Agricultural Instruction Act.

In this report will be found a comprehensive account of many of the leading phases of work conducted by the provinces of Canada with the assistance of the Agricultural Instruction grant, together with summary financial statements for the year under review. Other fields of work, particularly those of demonstration and scientific investigation, are not specifically dealt with for the reason that the nature of these activities, which remains much the same from year to year, has been indicated in previous reports.

I have the honour to be, sir,

Your obedient servant,

W. J. BLACK,
Commissioner.

REPORT

ON THE

AGRICULTURAL INSTRUCTION ACT

FOR THE FISCAL YEAR 1917-18.

Tabled in pursuance of Section 8 of the above named Act.

I. THE AGRICULTURAL REPRESENTATIVE SYSTEM.

In connection with the efforts of departments of agriculture to render more effective service to the farming industry in Canada, no more important step has been taken in recent years than the adoption of the agricultural representative system. For a long time it had been recognized that between the man on the land and government institutions, maintained for the purpose of helping him, there was no easy or well established line of communication.

The headquarters staff in agricultural departments has had to depend largely upon the publication of bulletins and reports and occasional lectures from the public platform to supply the men in the front line of practical agriculture with the latest information affecting their progress. Usually it has happened that the farmer has considered himself too busy in overcoming the obstacles that faced him to give attention to advice or information coming from authorities with whom he was not acquainted.

While farming is regarded as one of the most complex of all pursuits, approximately 70 per cent of the holdings have been found by investigation to be operated with but little recognition of the teachings of science or the findings of investigators in the field of plant and animal production. At the same time every other human activity, especially manufacturing enterprises, is guarded and directed by specialists whose services are regarded as indispensable and without whom success could not be achieved. The agricultural representative, a new type of public servant, is the farming specialist, the connecting link between the scientific laboratory and the man who sows, and reaps, and markets.

Just where and when the idea of having representatives of departments of agriculture, or agricultural colleges, as field workers in contact with practical farmers was first adopted, matters but little; the fact that the system has become known in Canada and is demonstrating its effectiveness is more important. It is of interest, however, to know that trained experts in agriculture known as "konsuldt" were first employed as consulting agents, or field advisors many years ago in Denmark, when that country was organizing the system of farming by which it has become famous. A little later the idea found its way to this continent and was adopted in the southern states as a means of reaching the indifferent farmer, and, about the same time, 1907, in Canada by the Ontario Department of Agriculture in an effort to provide better extension facilities.

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Since that time the value of the trained field representative of the department of agriculture and the agricultural college has become greatly appreciated by practical farmers, everywhere, who have had an opportunity of understanding the character of service that could be rendered by these officials. When the United States declared war and the importance of increasing food production had to be emphasized, a careful analysis was made of all the agencies operating in the interests of the farming industry, and it was unanimously agreed that the county agent, as the agricultural representative is known in that country, was the most effective instrument in rendering service to farmers in the production of more and better crops. At that time there were about 1,250 county agents scattered throughout the various states. At present there are 2,500 and, before the end of the present year, every one of the 3,000 counties in the Union will be covered by the system.

When the Agricultural Instruction Act was passed by the House of Commons in 1913, a marked impetus was given the agricultural representative system. To-day most of the provinces either have this branch of service well organized and running, or else in progress of organization. The character of the work being carried on varies according to the peculiar needs of the province and district in which the representative is called to operate. Usually, it is found that the most effective service is rendered by the representative who, in becoming established in a county, ascertains what the problems of the farmers are, and endeavours to render such assistance as the practical men resident in the district believe would be helpful. Particularly effective work is done where the field expert has organizations of farmers to confer with and assist him in his projects. The outline that follows will show the varied character of the problems dealt with, and the manner in general in which the work is carried on.

ONTARIO.

In Ontario the activities of the agricultural representative are so general and so far reaching in extent as to touch almost every phase of instruction and demonstration conducted under the auspices of the provincial Department of Agriculture. Nearly every county and district now has its representative and, throughout the province, agriculture is being improved and placed on a more profitable basis by this means.

One of the most important undertakings is the effort to encourage the young men on the farms and to give them a clearer insight into agricultural problems. With this in view, practical four to six-weeks' courses in agriculture are conducted each winter. Out of these classes have grown the Junior Farmers' Improvement Association. In 1914 the first Junior Farmers' Improvement Association was organized at the close of the special courses in agriculture. At the beginning of 1918 there were eighty-two such organizations with a total membership of 1,521. Briefly stated, the object is to create a deeper, more permanent and more intelligent interest in all that pertains to agriculture in its broadest sense. The movement is progressing very rapidly, and is now among the most important features of district representative work. The Junior Farmers' Improvement Association has a four-fold object in view—educational, social, research and investigational and financial. The meetings during the winter months partake of the nature of addresses, debates, mock parliaments, literature and music. During the summer, the Junior Farmers' Improvement Association in the district usually hold a picnic and conduct a motor tour through certain districts. In addition to the educational meetings the Association members take part in conducting the acre profit, live-stock rearing, live-stock judging and other competitions.

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Another general feature has been the promotion of undertakings to interest and instruct country boys and girls in country pursuits. The school fair has been made use of as a means to this end. With the fair is associated the home garden plot, and the projects in crop growing and poultry rearing. Over sixty thousand children annually take part in work of this character. Judged from its commercial value alone, the result is not negligible in these days when increased food production is being urged on rural and urban dwellers alike. As an educational factor and as a means of interesting boys and girls in country pursuits its utility is far greater.

In 1917, when the Ontario Department of Agriculture put on a campaign for greater production, it was faced with the difficulty of securing labour to supply the farmers' needs. This difficulty was met in some degree by the Government purchasing 127 tractors which were put at the disposal of the farmers throughout the province, to assist in ploughing and harrowing. In adopting this policy the Government has another object in view, namely, to demonstrate the usefulness of farm tractors on the average Ontario farm.

The agricultural representatives take charge of the tractors used within the borders of their respective counties. It is their duty to secure contracts, route the machines, engage operators, and be responsible for the general supervision of the work.

These are but a few of the more impressive instances of the effectiveness of the work of the agricultural representative in Ontario. The range of work is a very wide one and nothing more will be attempted than to indicate other activities, which may be regarded as more or less general. Farmers' clubs are organized, where local problems are discussed. Live stock clubs are organized, co-operation is encouraged, including egg-circles, seed grain is distributed, seed growers' association are promoted, seed potato plots and alfalfa experiments conducted, while orchard demonstrations, drainage surveys and campaigns against outbreaks of insect pests and animal and plant diseases are carried on. Recently, the office of the representative has been called upon to help solve the farm labour shortage, and has been of great assistance in dealing with the local distribution of farm help. The Federal grant contributes about three-fifths of the money expended upon the Agricultural Representative System in Ontario

QUEBEC.

The province of Quebec has twenty agricultural representatives, or "agronomists," who have charge of thirty-seven counties. During the active season, from May to November, their efforts are seconded by nineteen assistants. The work performed by these officers is similar, in a general way, to that carried on in Ontario and certain other provinces. It includes personal visits to farmers and the giving of information and advice in regard to methods. A general supervision is exercised by the agronomist over all agricultural organizations in his district, including co-operative societies and farmers' clubs. He also aids in the organization of fairs, home or school gardens, school fairs, competitions, lectures and demonstrations. Advantage is taken of the farm visits to gather statistics as to crops and live stock; also to inspect breeding animals belonging to farmers' clubs. The information obtained in this way is compiled and sent to the department.

It is proposed that the agronomists shall render assistance in connection with the increased production campaign of 1918, and to facilitate this work, office assistance will be provided. The agronomists purchase their own motor cars, for the use of which they are indemnified when in the performance of their duties.

The department encourages the granting of a bonus to the agronomists by the county. Twelve counties have hitherto responded to this appeal, making grants varying from \$100 to \$600, and it is expected that in due course all will endorse the suggestion. The work is supervised by a director, and the expenses are met largely from the Federal grant.

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MANITOBA.

Owing to enlistment, this phase of work in Manitoba has not been as prominent as could be desired. However, the men now in the field are demonstrating the fact that this feature of extension work is destined to be one of the most effective means of promoting successful agriculture.

SASKATCHEWAN.

Plans to develop a complete field service were under way in Saskatchewan when war was declared and heavy enlistments from the staff of the Department of Agriculture interfered. This year fifteen special representatives were selected to deal with greater production effort. Difficulty has been experienced in finding well qualified men, but the Provincial College of Agriculture no doubt will render special aid in this connection when peace is declared and normal conditions again exist.

ALBERTA.

The work of the Agricultural Representatives in Alberta is carried on chiefly as extension work from the provincial schools of agriculture, and is done in the period between school terms from April to September, inclusive. The schools of agriculture were the centers of operation in three cases and the demonstration farms in two. During the year 1917 the Department of Agriculture had five representatives in the field, engaged chiefly in the development of school fairs. School fairs were held at nine places in the province and included in all 166 schools. They affected the work of over 2,000 pupils. The number of exhibits was approximately 25,000. The results are considered excellent by the department and by the public.

In addition to the school fair work, the representatives gave aid, wherever possible, in such matters as cultivation, crops, eradication of weeds, care of live stock and the marketing of farm products.

BRITISH COLUMBIA.

In British Columbia, agricultural representatives operated with success in four districts for a period of three years previous to the beginning of the war. Since that time, the number engaged was diminished, but recently special workers have been secured to aid in the campaign for increased production.

NOVA SCOTIA.

During the past year there were six agricultural representatives employed in Nova Scotia—four of them continuously and two of them during a portion of the year. Considerable attention is given to co-operative work—the co-operative marketing of wool and potatoes and buying of fertilizers, flour and feeds.

The agricultural representatives have encouraged the use of lime as a means of improving the productive activity of the soil. They have acted as a medium between the scientific men employed at the Agricultural College at Truro, and the farmer, keeping the latter in touch with the latest discoveries and inducing him, by personal contact, to improve his methods.

NEW BRUNSWICK.

As the building up of the Agricultural Representative Staff had its inception during the year, the work of this branch of the Department was late in starting. In fact, it did not really begin until the fall.

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As at present constituted, there are three groups of representatives, with a chief and assistant in each. There being a mixed English and French population throughout a considerable portion of the province, each group has one English and one French-speaking representative.

For some time after their appointments the representatives busied themselves in becoming as thoroughly acquainted as possible with the conditions in their respective districts, at the same time giving what assistance they could in the different sections visited.

During the winter months they attended and addressed greater production meetings and assisted in the organization of poultry, pig and potato clubs. Meetings were also held by them with a view to the development of the sheep industry and organization for the co-operative marketing of wool.

PRINCE EDWARD ISLAND.

In Prince Edward Island practically all of the field work of the Department of Agriculture, outside of dairying and the work in the schools, is done by the representatives, there being no special live stock and other branches as in the other provinces. Hence their duties are wide and varied.

The year opened with an agricultural representative in each of the three counties of the province; but very shortly afterwards occurred the death of Mr. M. H. Coughlin, B.S.A., representative in Kings County, and a man exceptionally well fitted for his position. The vacancy has not yet been filled.

The work of the year included short courses in stock raising, dairying, crop production and marketing, distribution of pure-bred stock, drainage surveys, and directing of seed fairs. At all times the representatives are available as consulting advisors to the farmers of the island in matters pertaining to their business. Their influence is widely felt and their advice and counsel highly regarded.

II. CO-OPERATION AND MARKETING.

A few years ago, co-operation among farmers in a business sense was almost unknown in this country, although in many countries in Europe farmers had for years been very closely organized for the production and sale of their products, for the purchase of supplies and for the financing of their business undertakings. No subject of recent years has occupied more attention on the part of those concerned in agricultural economics than the subject of co-operation, it being realized that without it, Canada could never take the place in the marts of the agricultural and industrial world that her vast producing resources entitled her to.

When Instruction Act funds became available, advantage was taken of the fact in Ontario and Saskatchewan, to organize divisions of the local Departments of Agriculture to foster organizations of associations of farmers for co-operative undertakings. In each instance a director of co-operation and marketing was appointed, the purpose being to educate the farming community as to the advantages of co-operation, and, at the same time, to afford assistance to the inexperienced so as to enable them to organize in a way that would avoid fatal mistakes at the outset, and to systematize and simplify their business transactions. In certain other provinces the instruction grant assists the promotion of co-operative enterprise in an educational way, particularly in connection with egg, poultry and wool marketing.

ONTARIO.

Ontario, in instituting the Co-operation and Markets Branch in 1914, undertook to give assistance in the organization of co-operative associations, and to render more effective the organizations that were already operating in the province. As there were some fifty organizations in existence, engaged in the marketing of fruit and other products, as well as clubs for the purchase of seed, fertilizers and similar commodities, it was felt that a great opportunity for usefulness existed for a work of this kind.

In its early stages, the work consisted mainly in investigations as to the nature of the business conducted by organizations carrying on various forms of co-operative enterprise. These included organizations for the purchase and sale of products, co-operative cheese factories and creameries, and rural telephone companies. The effectiveness of municipal markets in bringing the producer and consumer together was investigated. A book-keeping system for co-operative associations was devised, and the matter of extending credits to farmers received attention.

As a result of the investigations carried on, the conclusion was reached that very few substantial and effective business organizations existed. The inquiry led to the belief that the time was ripe for concerted action looking to the formation of such associations.

The policy governing the work of the Branch was based on these facts, and is as follows: To assist, both in the reorganization of old societies and the formation of new ones, by giving instruction in (1) methods of organization, (2) basis of organization, (3) business methods and practices.

Much effective work of this description has been accomplished.

In 1917, provision was made in the Ontario Companies Act for the incorporation of co-operative organizations. This statute affords protection to bona-fide co-operative companies and associations, and provision is made whereby capital may be raised by means of "capital notes" as well as shares.

Many of the difficulties of co-operative organizations are due to the lack of a proper basis of organization. A standard set of by-laws has, therefore, been issued for their guidance. Where associations are organized in a similar manner, co-operation is made easier among local associations and a union of associations, leading to a larger organization is facilitated. An example of this is apparent in Lambton county, where 45 farmers' clubs have united to form the Lambton County Co-operative Association. In Leeds, Brant and Oxford counties, and elsewhere, similar amalgamations have been made, and the general tendency appears to be in the direction of larger and more permanent organizations, using the local clubs as units.

The number of farmers' clubs in the province is between 300 and 400. Most of these have come into existence during the last five years. The greater number are organized simply for the purchase of supplies in wholesale quantities. As a rule they are not incorporated and business is done through the United Farmers of Ontario, an incorporated organization doing about a million dollars' worth of transactions annually.

In the fruit districts several associations have been organized, consisting of locals operating through a central company. The fruit associations have been greatly handicapped during the last three years owing to poor crops and to adverse market conditions.

Egg circles continue to make progress, six having been added during the year. The business of the circles amounts to about \$250,000 annually. In the matter of live stock marketing, increased interest is apparent. Some thirty-five organizations, chiefly clubs, ship live stock to a central market. In some instances wool, lambs and

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other products are shipped. The business of these thirty-five associations during the year amounted to \$900,000.

The Co-operation and Markets Branch acts at times as a medium for the interchange of products among farmers' organizations, and assists in locating a market for products. The agricultural representative is usually the channel employed in assisting local organizations.

SASKATCHEWAN.

In Saskatchewan steps were taken in 1913 to facilitate the formation on a sound basis of local co-operative societies for the sale and purchase of farm products and supplies. This action had its origin partly in the conviction on the part of the farming community that the "spread" between the wholesale and retail prices was unduly great. The Saskatchewan Grain Growers' Association had demonstrated some of the advantages of co-operation, and in order to facilitate the formation of associations for the sale and purchase of commodities, an Act was passed to provide an inexpensive method of organization, with limited liability on the part of the individual members, and an equitable system of control and profit division.

A Co-operative Organizations Branch was added to the provincial Department of Agriculture and educational and demonstrational work undertaken. Informative literature was issued and addresses were delivered at farmers' conventions and elsewhere. Wherever a community of farmers showed a desire to take advantage of the provisions of the Co-operative Associations Act, advice and practical assistance were tendered, by-laws were suggested, different lines of work were indicated, men were sent to assist in the first co-operative shipment of live stock, and the difficult matter of co-operative accounting was provided for by ascertaining the simplest and best methods.

The following comparative figures will show the gratifying progress that has been made:—

	1915.	1916.	1917.
Associations reporting	102	173	309
Number of shareholders.. .. .	2,850	5,537	9,444
Paid-up capital.. .. .	\$ 13,494.20	\$ 39,421.49	\$ 92,940.27
Assets.. .. .	\$ 37,337.53	\$105,322.37	\$295,012.40
Liabilities, including paid-up capital. ..	\$ 29,717.33	\$ 82,956.57	\$232,938.81
Associations handling supplies. .. .	70	138	308
Value of supplies handled.. .. .	\$239,320.42	\$805,456.88	\$1,984,545.85
Associations marketing live-stock. .. .	9	10	23
Value of live-stock marketed	\$ 42,034.22	\$150,512.76	\$32,171.25
Other farm produce marketed .. .. .	.....	\$ 8,923.03	\$15,115.80
Total turnover.	\$281,354.64	\$964,892.67	\$2,122,832.90

At the close of 1917 the number of associations registered had risen to 367.

As regards co-operative production, but little advance has been made. There is but one co-operative farm where owners and employees work on shares, while there are only two cases of community breeding, one in horses and the other in cattle breeding. It is thought that this is because of the scattered nature of the settlement of the province and the pioneer conditions that still prevail over a large section.

In addition to the assistance given in the formation and operation of co-operative associations, several special projects have been taken up as demonstrations. These include demonstrations in the handling and shipment of cattle, wool gathering, grading, and marketing, and co-operative poultry marketing. On request, a representative of the branch assists any association in receiving, forwarding and marketing its first shipment of live stock. Account forms, sufficient to record one year's transactions are supplied. Twenty-five associations reported having marketed 444 cars of stock in 1917, compared with 241 cars by twenty-three associations in 1916. Reports from these associations indicate a saving of from one-half to one and a half cents per pound having been made on shipments marketed co-operatively instead of through drovers and buyers.

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Under the co-operative wool projects, 625 shipments were received from farmers in 1917, and marketed in Philadelphia. A member of the staff of the College of Agriculture took charge of the grading and storing of the wool, and after the sale had been made, each shipper whose methods had been faulty was advised as to the steps necessary for improvement. The instructional value of work of this kind is obvious.

To facilitate the marketing of poultry and to encourage poultry keeping, co-operative killing and marketing stations have been operated since 1915 at Regina and Saskatoon. The work is conducted jointly by the Co-operation Branch of the Department and the College of Agriculture.

III. INVESTIGATION.

FARM MANAGEMENT SURVEYS—SOIL SURVEYS—PLANT INTRODUCTION IN UPPER ONTARIO.

FARM MANAGEMENT SURVEYS, ONTARIO.

In 1917 the farm department of the Ontario Agricultural College continued its investigations regarding farm management. The work is under the direction of the lecturer in farm management, A. Leitch, B.S.A., and was for the purpose of studying the factors that have the greatest influence in increasing or decreasing the net income of the average farm. Itemized records were obtained of one year's business transactions on 113 farms in Caledon township, Peel county.

The findings of the survey, thus far, may be summarized as follows:—

1. The size of the business on the small farm engaged in general mixed farming is too small to pay all expenses and leave more than a very small labour income for the operator.

2. High profits from live stock have a greater influence on the labour income than have high crop yields.

3. The quantity of the live stock determines the amount of feed that may be fed profitably. Heavy feeding to stock of low quality means a loss rather than a gain. In order that the crops grown may be fed upon the farm to keep up the soil fertility, and at the same time yield a profit, the quality of the stock on a great many farms must be improved.

On the 190 farms visited in Caledon township were found the following proportion of pure-bred and grade sires:—

	Pure Bred.	Grade.
Draught horses.. . . .	4	0
General purpose.. . . .	1	8
Light horses.. . . .	0	3
Beef cattle.. . . .	20	16
Dairy Cattle.. . . .	1	17
Sheep.. . . .	13	122
Swine.. . . .	3	1

A second farm-management demonstration survey has been carried out under the same auspices. The work has been done in the county of Oxford, where farms have been selected to represent average dairy farm conditions in Western Ontario. Parts of seven townships were covered, including 430 farms, which is about one-fifth of the farms in the territory covered. A similar survey will soon be commenced in the county of Dundas, where conditions representing average dairy farming in Eastern Ontario will be exemplified. It is the purpose of the Ontario Agricultural College to repeat these surveys annually in these districts for five years, and to deal with other districts and other conditions of farming. The Caledon township survey was carried on with funds provided under the Agricultural Instruction Act. The later surveys

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are being financed with provincial funds apart from the salary of Professor Leitch, which will continue to be drawn from the Agricultural Instruction Act appropriations.

EXPERIMENTS WITH FRUITS AND VEGETABLES IN UPPER ONTARIO.

The Northern Ontario Plant Breeding Station is located on the Provincial Industrial Farm, nine miles southwest of Fort William. The Department of the Provincial Secretary, which administers the Industrial Farm, supplies the use of the land, greenhouses and accompanying buildings, unskilled manual labour and horse labour; the Department of Agriculture directs the work, employs the trained men, and supplies the special machinery and appliances necessary, meeting the cost from Instruction Act funds.

The leading object of the work is to ascertain what fruits, vegetables and ornamentals, now available in the trade, will thrive in the northern districts of the province. Another interesting and important feature is the improvement and propagation of wild native plants and their use with domestic strains in breeding up a hardy pomology and satisfactory horticulture for the vast extent of country north of the Canadian Pacific railway.

Some preliminary work was undertaken in 1916. In 1917, the work was placed under the jurisdiction of the Fruit Branch of the Department of Agriculture and reorganized on a larger scale, with a graduate of the Manitoba Agricultural College in charge.

In 1917, the plantings in the garden included commercial varieties of all vegetables, and many varieties of bush fruits and strawberries. In the fruit-tree plantation apples, pears, plums, and cherries have been set out. In the nursery were planted standard and seedling apples, and shade and ornamental trees and shrubs of species deemed suitable for the country, together with forest-tree seedlings.

Bush and cane fruits and strawberries find these regions generally congenial. They will be propagated as rapidly as possible for general distribution. Varieties of fruit trees that are proving satisfactory will be propagated and furnished to experimenters. Vegetable seed from selected strains will be grown with a view to supplying farmers with types specially suitable for the climate. Plantations of the different native fruits of promise will be set out in order that their variation under cultivation may be observed. Experiments and demonstrations will be made in plant propagation, plant protection, and in the storing of roots and vegetables.

A suitable site has been placed at the disposal of the station for demonstration work with ornamentals. In this plantation the qualities of native shrubs and trees will be compared with those of introduced species.

ONTARIO—SOIL SURVEY.

Soil survey and soil demonstration work has for some time been receiving the attention of the chemistry department of the Ontario Agricultural College. The province from Windsor as far east as Kingston, has been covered in the preliminary survey, and a great variety of types of soils have been found.

Samples of soils of various types have been taken and analyzed. Demonstrations plots on some of these types have been started and are giving interesting results. For instance, the increased yield of mangels on plots treated with fertilizers was from 75 to 90 per cent greater than on the manured but not otherwise fertilized check-plots. A number of experiments with lime and phosphates are being carried on. These apparently are the two mineral constituents most needed by Ontario soils.

NOVA SCOTIA—SOIL SURVEY.

The systematic survey of Nova Scotian soils, from the chemical standpoint, is being prosecuted by the chemistry department of the Nova Scotia College of Agricul-

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ture. Two of the more important agricultural districts, namely, the Stewiacke and Margaree valleys, have recently been visited and representative samples have been taken from the various soil-types in these districts. Special attention is being paid to the question of soil acidity, and where lime has been recently used an endeavour is being made to ascertain what benefit has accrued, if any.

Fertilizer Investigations.

Another line of work is to investigate local sources of materials which may be added to increase the productive power of the soil. To this end many rocks, mud, swamp deposits, fish-waste and fertilizers have been analyzed.

After two years of field work, the investigators are convinced that for increased soil fertility, the material most available in that province is limestone. Many farmers report increases of from one-half to one ton of hay per acre, and better clover and turnips, from the use of ground limestone.

Fertilizer Demonstrations.

In order to make extensive tests of the value of limestone, the department, last year, selected Margaree, a point in Cape Breton, away from railway transportation, hired a limestone crusher and sent it to this point. Over 1,000 tons of limestone were crushed during the season, and this will be used under varying conditions for the purposes of demonstration and the securing of further information as to its value.

To determine the value of raw rock-phosphate, by way of comparison with acid phosphate, a car of it was imported in 1917 from Tennessee. This is being tested at Truro, Nappan, and Kentville.

IV. WOMEN'S WORK.

WOMEN'S INSTITUTES—HOMEMAKERS' CLUBS—HOME ECONOMIC SOCIETIES.

The aid to women's work under the Agricultural Instruction Act has been given in acknowledgement of the difficulties and disadvantages associated with domestic life on the farm and in response to the needs of farm women. It was realized that to concentrate on the improvement of agriculture and at the same time neglect the improvement of home and social life would be a one-sided arrangement. Instruction that would enable women to make their homes healthier and their lives brighter was urgently needed. The demand was insistent for practical information—information that should be brought right home to women through the medium of ocular demonstrations, lectures, bulletins, motion pictures, and all other available means.

The burden of domestic work falls heavily on the women of the farm. Overwork is a common and widespread complaint. The farm woman can get no help for herself, and the help her husband has she must provide for. Lack of modern labour-saving devices, of modern heating, lighting, water and sanitary systems, add to that burden. The farmer in the labour shortage is aided by information as to labour-saving devices. His wife asks for similar assistance.

Not only does the farm woman require help in her work, but she also needs aid in finding outside diversion. Being constantly employed with tasks of a routine nature, she is confined to her home, and has few opportunities for social intercourse with her friends and neighbours. Under such conditions she often suffers from isolation and loneliness and the improvement of herself and her children become difficult.

The work carried on in the interest of women by provincial departments may be broadly stated as having for its object the betterment of living conditions on the farms.

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In every province the work has been greatly assisted, if not entirely financed, from instruction funds, whether conducted under the auspices of women's institutes, home economic societies or homemakers' clubs. Since the war began patriotic efforts have to a large extent engrossed the attention of the membership of these organizations, but, on the whole, the programme of instructional work has been carried out, and the attendance at gatherings of this description has been satisfactory.

ONTARIO.

In Ontario at the time the Agricultural Instruction Act was passed, women's institutes had long been in existence. When the grant became available, it was made use of to finance demonstration lectures in household science and related subjects. Demonstration lecture courses in sewing, food values and cooking were systematically carried on among the 900 women's institute branches, having a membership of approximately 30,000.

In addition to these courses, many demonstrations have been given since the outbreak of the war on the canning and preserving of fruits and vegetables, war breads, etc. Demonstrators for this feature of work were sent to 175 places with an aggregate attendance of 15,580.

A number of centres asked for canning demonstrations at the fall fairs. Equipment was provided and demonstrators sent to Toronto, Ottawa, Picton, Peterborough, Windsor, and other places. In connection with the campaign for food conservation, community canning centres have been established at various points.

The carrying on of medical inspection in the rural schools is becoming an important feature of institute work. Reports from the schools indicate that the children and the schools in the rural districts need more attention than they have received hitherto. In one county, out of twenty schools, only two were properly lighted. The seating was good in four; for the remaining sixteen the child had to fit the seat rather than the seat fitting the child. Only two were properly ventilated. Upon examining the children 38 per cent had defective vision, 28 per cent had nose and throat trouble, 75 per cent had defective teeth, and 5 per cent had poor hearing. Following the inspection, clinics are held in some places, sometimes in a church, a townhall or a private home. Two doctors and two nurses are usually employed. The department provides a doctor to do the inspecting and assists the institute in financing the clinic.

The object of the department is to demonstrate the great need for medical inspection and to create public opinion in its favour, so that by and by some practical and not too expensive method may be adopted for inspecting the whole of the province.

In addition to the above special features of work, the members of the institutes, made up largely of farm women, take a keen interest in the lighter forms of agriculture, especially fruit-growing, poultry-raising, gardening, bee-keeping, dairying, etc., many of the members taking advantage of the joint meetings held under the auspices of the women's institutes and the boards of agriculture during the winter months to secure information bearing upon the above lines. The women and girls on the farm have had to accept a larger responsibility in the work of production, although they could ill afford the time from their arduous household duties.

QUEBEC.

Organization among the farm women of the English-speaking portion of the province of Quebec is now carried on under the direction of the School of Household Science, Macdonald College, assisted by funds derived from the Instruction grant.

The year 1917-18 has been for the Quebec homemakers' clubs one of marked activity and progress. War work and food conservation were given marked promin-

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ence. The clubs recognized as never before the importance of their object not only in respect to the home and community, but to that larger collection of homes and communities, the nation.

The school-fair work, which in the long run will greatly help to keep boys and girls on the farms by arousing their interest in and creating a greater respect for the professions of home-making and agriculture, received even more than its usual share of attention—many of the clubs assisting with the prize list and doing their utmost to encourage the children to exhibit at the fairs. The Macdonald College demonstrators to the Quebec homemakers' clubs, co-operating with the Government demonstrators and the Macdonald College demonstrators to rural schools, gave nearly four months of their time to this work. Sixty-eight practical demonstrations in bread-making and canning were given to the schools at various centres throughout the province. The total number of lectures and demonstrations given by the demonstrators of the extension department was one hundred and forty.

YOUNG WOMEN'S CLUBS.

(Cercles de Jeunes Fermières.)

In Quebec province generally, clubs are being organized under the Department of Agriculture for the benefit of the young women of the rural districts. These clubs form the medium for instruction not only in home subjects, but in gardening, bee-keeping and poultry-rearing. Four-day courses in household science are given, two sessions being held each day. The subjects taken up are sewing, food, lodging, canning, and agriculture for women.

MANITOBA.

The home economics societies in Manitoba are under the supervision of the superintendent of Agricultural Extension. During the year the number increased from eighty-four to ninety-eight, with a membership of 3,950.

The extension service co-operates with the societies in holding four-day short courses in dress-making, millinery, home-nursing, cookery and canning. Two hundred and seventeen of these courses were held during the year, at which there was an average enrolment of twenty-four for each course, or over 5,000 for the province. As in other provinces, much of the attention of these societies has, since the war, been taken up with patriotic work. However, a number of societies have not failed to keep up demonstration work. Much good work is being done by the members, through the assistance they are rendering to all phases of rural life including the school, the church, boys' and girls' clubs, and rural co-operation.

At the annual convention held in Winnipeg in February, 1918, 125 delegates from 66 societies were present. The convention lasted for three days.

Considerable attention is given by the home economics societies to boys' and girls' club work. Almost every club has a home economics society member on its directorate. Their efforts have not been confined to work in which girls are interested but they have encouraged chicken, pig and calf-rearing contests as well as assisting in the raising of funds for school fairs.

The home economics societies have co-operated with the health department in assisting the school nurses, and have consistently advocated medical inspection in the schools. In a considerable number of cases they have lent their assistance in beautifying the school premises both inside and out.

An increasing number of home economics society members are serving on school boards, and through them have succeeded in effecting many changes which are a direct benefit to the school children.

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SASKATCHEWAN.

The homemakers' clubs of this province are carried on as a division of the extension service of the College of Agriculture of the University, and are in charge of a director.

The nature of the work undertaken by each club depends largely on the needs of the women themselves, and on the needs of the community. The principal activities are in connection with patriotic work and short courses. Speakers and demonstrators are sent out as asked for. All the clubs are interested in home problems and are anxious to get the young people interested also. Much has been done towards encouraging school-gardening, improving school-grounds and school sanitation and in starting community libraries and reading-rooms.

The homemakers' convention is perhaps the greatest event in the life of the clubs. This gathering is held at the university and the delegates are accommodated in the residence as far as possible. The railway expenses are paid and a small allowance is made towards living expenses.

There are at present 192 clubs, with an approximate membership of 5,100. Total number of meetings held during the year, 2,280.

The clubs have raised \$75,000, or thereabouts, for patriotic purposes, and have made 27,000 articles for Red Cross and like activities.

Almost generally the club women have interested themselves in the work of food conservation and food production. It would seem that wherever homemakers' clubs have been established medical inspection of schools and proper medical attendance for the people has been and is being looked after. Rest rooms and club rooms have been established where deemed necessary, while almost every club manages a school fair, giving particular encouragement to children's farm and garden products. Forty-seven university circulating libraries are in circulation.

During the year the extension department provided twenty-seven short courses (from one to four days' duration), at which there was an aggregate attendance of 2,950. At eleven of these places special meetings were held for school children. These courses comprised courses in sewing, foods, and cookery and hygiene. The work in foods and cookery was mainly along conservation lines.

The homemakers' clubs hold their annual convention in the month of June. The attendance at the last was over 300. A girls' convention was held last June, at which the attendance was 75. The course given them included food and cookery, household management, health and hygiene, discussions on libraries and reading and girls' club work.

ALBERTA.

Women's institutes in Alberta have made rapid progress and are now organized practically throughout the province. The year was one of much activity, the work being largely influenced by the conservation propaganda appropriate to war conditions. One hundred and sixty short courses were held at points distributed throughout the province, with special reference to the needs of outlying districts, such as the Peace River. The courses included home-nursing, first aid, and conservation of child life. Canning and war-time cookery were given a prominent place. Bulletins on canning, on the care of babies, and on food and cookery, were published in issues of ten thousand in each case.

BRITISH COLUMBIA.

In former years the Instruction grant to British Columbia assisted in meeting the outlay on women's institutes, but in 1917 the work was financed entirely from

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provincial appropriations. In certain districts the institutes have been instrumental among other lines of work in securing improvement in rural school conditions, in regard to equipment and surroundings and in connection with school gardens.

THE MARITIME PROVINCES.

In Nova Scotia and Prince Edward Island, women's institutes date from 1913. In New Brunswick a somewhat earlier start was made, but in all three provinces the movement owes its development largely to the Federal grant. In each case a superintendent is provided, and the lines of work taken up are very similar to those followed in other provinces, including short courses, lectures and demonstrations, and the holding of an annual convention. Great interest has been taken in rural-school improvement, in patriotic work, and in food conservation. In each of the Maritime Provinces a small grant is given to each institute, to assist in financing.

V. ELEMENTARY AGRICULTURAL EDUCATION.

AGRICULTURAL TEACHING IN PRIMARY AND SECONDARY SCHOOLS— HOUSEHOLD SCIENCE—TEACHER TRAINING—HOME AND SCHOOL GARDENS.

ONTARIO.

In Ontario, where 45 per cent of the school population is enrolled in the rural schools, the educational authorities regard the rural school as constituting one of the most urgent educational problems of the province. The training of teachers in agriculture at the Agricultural College, the teaching of agriculture in the schools, the encouragement of school and home gardens, and the development of the rural-school fair by the agricultural representative, are all tending to modify the course of study formerly followed exclusively in rural schools, and to adapt it to the needs of rural life.

The money allotted to elementary agricultural education in the province under the Agricultural Instruction Act is used in various ways, but the chief object kept always in mind is, that the best results will be obtained by employing it to bring about directly the actual teaching of agriculture in the schools. To accomplish this, a part of the money is used in the training of the teacher, another part in payment for actual equipment to be used for instruction, another for the work of special inspection, and still another to boards and teachers for managing school gardens.

In Ontario, agriculture and nature study are two distinct subjects. Recognition is given only to organized elementary agriculture, begun when the pupil enters the fifth grade of the public school, and carried on in connection with school gardens and other projects, through the eighth grade. The teaching of agriculture is optional, whereas nature study is obligatory.

With respect to the methods of management of agricultural classes, text-books are not studied. It is regarded as essential to success that the work should be made practical and deal with things rather than with books. A teachers' manual to be used in assisting and guiding the teacher in regard to knowing what kind of material to use and how to use it, has recently been published. The manual is for the use of the teachers and not for the pupils. However, by way of reference, extensive use is made of books, bulletins and periodicals.

Agriculture in Public and Separate Schools.

The introduction of agriculture as a regular subject of the public school curriculum is proceeding quite rapidly. Many of the difficulties which formerly appeared

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great, are being overcome. Wherever the subject has been carried on for a year or two, confidence is manifested in its usefulness, not only as a subject fruitful of practical results, but also as a subject contributing towards a liberal education.

In 1917, 950 public and separate schools qualified for grants. Comparative figures are given in the following table:—

Year.	No. of Schools.	With School Gardens.	With Home Gardens.
1913	159	....	....
1914	264	208	56
1915	407	222	185
1916	585	324	261
1917	950	550	400

	No. of Teachers with Agricultural Certificates.	No. of Teachers with Second-class Certificates.
1915	100	307
1916	201	384

Agricultural Secondary Schools.

Twenty-two secondary schools conducted classes in agriculture in 1916, with about 600 pupils. To promote the teaching of agriculture in the secondary schools, allowances are made to boards for the purchase of equipment, and to the teacher for conducting the work.

The chief difficulty met with in introducing and maintaining classes in agriculture in the secondary schools is the lack of legally qualified teachers. Another drawback is that Ontario universities have not yet seen their way clear to give some recognition to agriculture as a preparatory subject for entrance into the universities.

Three high schools—Whitby, Drayton and Oakville, have introduced separate departments of agriculture. Whitby has also added a course in farm mechanics. Two other schools are planning to commence agricultural work in 1918.

Wherever a department of agriculture has been introduced, extension work is being done. This movement contemplates the introduction of winter short courses designed to meet the needs of country people. To this work it is intended that the whole staff of the high school shall contribute so that subjects other than those considered as strictly agricultural may be taken up. By this means it is proposed to extend the advantages of the high school to the surrounding country.

The practical value of the extension work is well illustrated by the campaign against late blight of potatoes conducted in 1917 by the Drayton High School. The knapsack sprayers owned by the school were employed to demonstrate the value of bordeaux mixture in overcoming this disease which threatened considerable damage to the crop. Demonstrations were given on several farms, and in other instances, farmers were allowed the use of the sprayers. "The work done in the neighbourhood may easily have saved more potatoes than would pay the cost of the school, and the gain is not for one year alone, because when farmers see the advantage they are eager to profit by it."

Teacher Training.

The Education Department aims to maintain a strong course in agriculture in the Normal schools in order to make the teaching of agriculture effective. The special object of the course in agriculture is to prepare the teacher-in-training to train pupils for farm occupations, and to broaden and deepen their interest in nature and their sympathy with rural life.

The following topics, with some attention to methods of teaching the subject are taken—dairying, poultry, breeds of farm animals, field crops, horticulture, birds and insects, experimental plots, school gardens, home projects, and care of school-grounds. To procure special equipment for teaching these topics, use is made of the funds supplied by the provisions of The Agricultural Instruction Act.

Teachers' Courses.

A summer course in agriculture for teachers is held each year by the Department of Education at the Ontario Agricultural College.

The actual travelling expenses of the teachers in attendance are allowed, in addition to \$25 for the cost of board and lodging during the preceding summer session, provided the teacher has completed the summer course leading to a certificate in agriculture and has given satisfactory instruction in agriculture during the past school year.

The number in attendance at the teachers' courses, in 1917, as compared with previous years, is given in the following summary:—

Year.	Elementary.				Intermediate.				Total.
	Part 1.		Part 2.		Part 1.		Part 2.		
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	
1911	8	75	1	16	.....	.....	.....	.....	100
1912	16	65	2	23	.....	.....	.....	.....	106
1913	14	64	5	36	23	4	.....	.....	146
1914	8	55	5	27	13	4	14	.....	126
1915	15	39	5	18	17	1	9	1	105
1916	11	99	9	31	15	3	14	1	183
1917	15	138	7	81	9	1	13	2	266

The Inspector of Elementary Agricultural Education supplies the following particulars as to the summer courses of 1917:—

During the term a course of ten lectures was given by Mr. H. Foght, specialist in rural education of the Bureau of Education, Washington, on the following subjects:—

1. The rural problem analysed in relation to its educational, social, and religious elements.
2. Institutional means for remaking rural life.
3. The farmer's wife, a vital factor in the problem.
4. The teacher and community leadership.
5. The complete rural community school (illustrated).
6. Good roads and education (illustrated).
7. What every teacher can do for the advancement of vocational education (illustrated).
8. The teacher and the play-life of the school (illustrated).
9. The meaning of modern sanitation in school and home (illustrated).
10. The revitalized course of study for rural schools.

School and Home Gardens and Projects.

Of the 950 schools conducting classes in agriculture from 550 to 600 have school gardens. The educational authorities state that considerable progress is being made. In the rural districts, a disposition is shown to provide what is needed in the way of land and equipment wherever the value of the movement is made clear. In the spring of 1917, increased food production was emphasized. Instead of growing flowering plants, many of the gardens, following the recommendation of the Education Department, devoted the school plots to food crops such as beans and potatoes. As a result

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of the increased interest thus created, a number of schools undertook gardens for the first time, while the various home projects were enlarged upon. The cultural processes were performed as a part of the regular class work in agriculture. At the New Liskeard Continuation School the agricultural class grew one acre of potatoes thereby utilizing the work of both boys and girls to add to the production of food. At the same time the physical exercise obtained was of no less value than if secured in a costly gymnasium. The educational value of the work is of importance, while the out-door classes are no more difficult to manage than classes in the school room. The home project is also useful from an educational point of view. It takes a variety of forms, including poultry, calf and pig rearing, but the commonest is the home garden. Some 152 schools featured food production in 1917 in connection with teaching work.

Household Science and Manual Training.

A movement is under way in the province of Ontario to extend the teaching of household science to the rural schools. In order to promote the introduction of manual training and household science into these schools successful attempts have been made to overcome the difficulties that have hindered progress in this direction such as limited accommodation and resources. Substantial grants are now being offered to assist school boards to purchase equipment, and equipments have been designed that take up but little space in the one-room school. These equipments vary in cost from \$40 to \$75 and are provided almost entirely from the government grant.

In urban schools the children are able to go home to lunch but in a large number of country schools this is not the case, and in many of them the composition of the lunch and the conditions under which it is eaten are conducive neither to sound physical development nor to effective mental work in the afternoon.

In the United States it was found that the percentage of physical defectives as disclosed by the draft was seven per cent higher from rural districts than from towns and cities. This may be attributable in part at least to the conditions under which the noon-day lunch is eaten. No statistics are available for Canada but it is probable that somewhat the same conditions exist.

In order to remedy such conditions the provision of one hot dish such as a bowl of soup, or a cup of cocoa to supplement the cold box-lunch is advocated. This is not only a good thing in itself but it affords an introduction to more formal lessons in household science. It is not a difficult matter for the rural school child to bring a tomato, a potato or an egg, and these contributions are combined. When properly organized the lunch can be prepared without any appreciable loss of school time. The older girls, and boys too, take a delight in doing this work and get some useful training while doing it. Where the school possesses a large table, it can be set, and the lunch eaten in an orderly manner, or each desk may be set as one unit of a table. In this way the lessons in manners may be given a decidedly practical turn.

In Saskatchewan, where this movement has been in existence for some time, there are 150 schools where the hot dish is served at noon and the unanimous opinion of teachers, parents and inspectors alike is that the health of the children is improved, and that the afternoon work is made more effective.

The household science instruction does not consist of cooking only but also includes lessons in cleaning, general household management and sewing. The sewing is taught from the lowest grades, and for the older girls consists in the making and repairing of simple garments. The immediate object aimed at is to install this work in at least six schools in each inspectorate. These schools will then serve as object lessons, and from them the work should spread throughout the country.

Manual training for boys consists in teaching simple mechanical drawing, and of the use of tools in making articles for the farm and the farm home, such as feed

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troughs, hen coops, chicken houses, dog kennels, hen roosts, gates, milk stools, wall shelves, hat racks, foot stools, benches, towel rollers, etc. Mending, repairing and the preservation of farm implements also receives attention. Locks are repaired, latches are mended, broken harness is put into workable shape. The importance of keeping the material equipment of the farm in thorough working order is stressed, and all the work is connected with the requirements of actual life. A new scheme of grants in aid of this work has recently been devised and it is hoped that these will lead to a rapid extension of the subject throughout the schools. A manual, well illustrated by drawings and photographs will be prepared, giving full instructions to teachers regarding organization and methods of work, and this it is hoped will remove some of the natural hesitation now felt by teachers to take up this work.

Education of this type is both cultural and practical. It not only prepares for work on the farm and in the farm homes but vitalizes the curriculum, and lays the foundation for higher industrial and technical education. The inspector gives all the help possible to schools desiring to introduce these practical subjects, and is available at all times to confer with trustees and teachers, and to address organizations anxious to promote the introduction of these subjects and to make them directly applicable to the peculiar conditions of particular schools.

QUEBEC.

The official programme of the Roman Catholic schools of the province of Quebec prescribes the teaching of the elements of agriculture from the third to the eighth year, inclusively. The teaching is based on the official text book on agriculture assisted in some cases by the school museum and, very generally, by the school garden. Some twenty thousand pupils perform school or home garden work, the department distributing seeds and plants to pupils and issuing cultural directions. In 1918, the extension of home gardening is proposed in order that school children may assist in the greater production movement.

The school inspectors are given instruction in general agriculture, horticulture and poultry work at special short courses, held for the purpose. Instruction to teachers is given by the inspectors at teachers' conventions. The inspectors also deliver lectures at primary schools to promote school gardening.

In the twelve Normal schools, the official manual of agriculture is the basis of lectures. At all the Normal schools a demonstration garden is provided, and attached to many is a model poultry plant. Instructors of the Quebec Department of Agriculture give demonstrations in horticulture, fruit growing and poultry rearing to the students.

The best agricultural teaching in the primary schools is claimed to be based on the gardening movement, which has been systematically developed and is now quite general, there being in 1917 no fewer than 850 school gardens cultivated by 20,000 children. In this development Instruction Act moneys have greatly assisted. Boys' and girls' clubs and school fairs have been the logical outcome. The school and home garden movement is under the direction of a special officer attached to the Department of Agriculture, assisted by the Horticultural staff and the agricultural representatives.

Household Science.

Domestic science is taught in many convents of Quebec. Fifty-one of these institutions, under the management of nuns of various orders, each receives from the provincial Department of Agriculture, from funds provided under the Agricultural Instruction Act, a yearly grant provided that such institutions give a domestic science course officially recognized of good efficiency, and that they make a full report of their

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work three times a year to the Department. These domestic science schools are visited each year by a special inspector who judges their work by the competence of the superintendents and the practical work of the pupils.

Three other domestic science schools, also subsidized by the Department of Agriculture, work under the direction of lay teachers and give excellent results. They are: The Domestic Science School of Macdonald College, Ste. Anne de Bellevue, the Provincial Domestic Science School, 14 Church St., Montreal, and the Domestic Science School of Shawville, Pontiac county.

All the Quebec domestic science schools are under competent direction, being managed by women regularly qualified and well trained in the teaching of domestic science. The total number of pupils is 7,439.

Two of the religious schools undertook during the summer vacation to give a short course in domestic science. They were the schools of Mont Joli, Matane county, under the direction of the Sœurs du St. Rosaire and of St. Georges, Beauce county, under the direction of the Sœurs du Bon Pasteur. The lessons and practical demonstration given lasted five consecutive days at each place. There was an average attendance of 150 persons at each lesson and practical demonstration.

Elementary Agriculture in Protestant Schools.

In the Protestant schools of Quebec, 93 per cent of the children are in the elementary schools, and half of these are in rural schools. Agricultural instruction, therefore, has a vital relationship to the lives of half of the Protestant children. This fact has been recognized by the Council of Public Instruction, and a strong course in nature study has been authorized for the first eight grades. The course includes two lessons a week for each class throughout the year. The Council of Public Instruction has under discussion the question of advanced agriculture for high school grades.

Macdonald College has taken the important step of declaring that one of the requirements for matriculation into the faculty of agriculture shall be the passing of an examination in nature study and elementary agriculture. For those who did not have an opportunity of passing this in the school-leaving examinations, special supplementary tests will be held at the college on entrance.

In 1915, a rural school department was created at Macdonald College with the object of assisting the rural Protestant schools in the study of agriculture. This movement, while independent of the regular educational authorities, is countenanced and approved by them.

Home and School Gardens.

There are few gardens now successfully conducted in connection with the Protestant schools. Many of those attempted have been abandoned because of the difficulty of caring for them during the summer months. It should be remembered that the rural Protestant population of Quebec is scattered and the schools have small enrolments. In addition, some of the more isolated sections are unable to secure trained teachers through their inability to pay for them, although the number of teachers without diplomas is being rapidly reduced, there being 80 fewer than in the previous year. Home gardens, however, have been very successful. Two demonstrators connected with Macdonald College spend their whole time in directing this work, and in organizing school fairs. Several visits are made to each school. The work is explained, the seeds and other materials are distributed, the gardens are inspected, and the school fairs are judged. These projects and school fairs have caught the interest of the pupils, parents, and school trustees. More successful work of an agricultural nature has resulted from this scheme than from the previous school gardens.

Teacher Training.

Protestant teachers in training receive instruction in nature study and agriculture at the Macdonald College. It was found, however, that a large number of Protestant teachers had not had the benefits of these studies, and in 1915, summer courses were inaugurated. A bonus of \$15 and a mileage allowance are paid to each student who successfully completes the course and is awarded a certificate. In addition, two demonstrators are employed to go from school to school showing teachers how to teach the subject. With this they conveniently combine the school fair work.

SASKATCHEWAN.

In Saskatchewan, school agriculture is under the supervision of an Agricultural Instruction Committee. The committee is composed of the following: The Superintendent of Education, the Deputy Ministers of Education and Agriculture, the Dean of the College of Agriculture, the Director of Agricultural Extension and the Professor of Agricultural Engineering of the College of Agriculture, the principals of the two Provincial Normal Schools and the two Directors of School Agriculture. The Directors of School Agriculture and a Directress of Household Science were appointed early in 1915.

Ever since the province was first organized nature study has formed a part of the public school curriculum and has also been taught in the normal schools. Agriculture and nature study appear in some form in the course of study for each grade of the public school and are compulsory in the examination to qualify for entrance to high schools and collegiate institutes. In the public schools the work consists of nature study, school gardening and elementary agriculture.

High School Agriculture.

The teachers of the natural sciences have hitherto been responsible for agricultural instruction in high schools. This was regarded as not being altogether satisfactory, and an effort is being made to encourage more young men to prepare themselves for educational work in agriculture by taking the B.S.A. course of the College of Agriculture in addition to the regular professional training.

With a view to encouraging boards of trustees to provide for agricultural instruction in the secondary schools of the province, a grant of \$500 is offered to any high school or collegiate institute district which makes provision for a special course in agriculture under the department's regulations.

Household Science.

In the autumn of 1914, a director of household science was appointed to the staff of the Department of Education and paid from the instruction grant. Saskatchewan is the first province in the Dominion to take this forward step. The duties of the director include the supervision and direction of the work of teachers in training in the normal schools, the inspection of the work of high schools, and the extension of household science to the schools in rural communities.

Previous to 1915 the teaching of household science was almost entirely confined to the city schools. During that year the effort was first made to extend this work to the rural communities. Through the medium of teachers' conventions and institutes, teachers have been urged to teach sewing and sanitation, and, wherever practicable, to have the pupils prepare for themselves each day one hot dish to supplement the cold noonday lunch. Some phase of household science is now being taught in about one-third of all the town and village schools of the province.

Training of Teachers.

Provision is made for the training of teachers for agricultural instruction in the Regina and Saskatoon normal schools, the College of Agriculture and the summer school for teachers in elementary agriculture and science. A director of school agriculture has charge of the work at each of the normal schools. At the Saskatoon School the dean and the professors of the College of Agriculture assist the director by lecturing to the normal school students on their special subjects. At Regina a similar course is undertaken by the director, assisted by the curator of the Provincial Natural History Museum and the superintendent of the Dominion Experimental Farm at Indian Head. No special certificates for agricultural instruction are given to teachers because of their normal school work, but a diploma is given to those who satisfactorily complete a two-year course at the summer school held at the College of Agriculture of the University of Saskatchewan.

The return railway fare of all who satisfactorily complete the summer school course is paid by the Department of Education from Instruction Act funds, and students are provided with residence at the university at the rate of one dollar per day.

Special attention is given to the training of teachers in household science, two specialists having been engaged to give the necessary instruction in the normal schools.

Rural Education Associations.

A number of rural education associations have been organized throughout the province with the assistance of the directors of school agriculture. These associations consist of teachers, trustees and others interested in educational and social work. They take local control of school fairs, boys' and girls' clubs and contests, and social service work generally.

BRITISH COLUMBIA.

In British Columbia elementary agriculture is regarded by the educational authorities as occupying a dual position in the training of boys and girls, (1) for its own sake as a preparation for practical work in farming, (2) for the broader educational or disciplinary value. In the lower grades the latter aim is obviously most important and the former merely incidental, while in the advanced and high-school grades the order is reversed and the scientific and economic viewpoints are uppermost. In the lower grades the work begins as an intimate personal study of environment, more or less informal in its character and closely adapting itself to those interests that predominate in the developing child mind. In other words, the study of the forms, forces and relationships of the child's natural environment afford the logical of proper basis for further advancement along the line of agricultural studies. In this sense elementary agriculture is merely applied nature study. The school or home garden quite naturally becomes the place and also the means whereby much of the application takes place. The garden provides that great essential in elementary education, namely, constructive and purposeful activity.

The agricultural work of the public schools, which includes the entire programme of nature study and school gardening, is the logical antecedent of a more scientific study of agriculture in high schools. It is only recently that any provision has been made in connection with high school courses of study in British Columbia to meet the needs of those who aim at making agriculture a life study or a life-work. At the present time the students in attendance at nine high schools have been given this opportunity of taking up the scientific study of agriculture. It is expected, however, that in the near future other schools and other districts will have these agricultural courses established, and that before many years have passed provision will be made

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for the study of agriculture in all districts in British Columbia where the practice of agriculture is, or may be, of great importance.

The department now employs six district supervisors to give instruction to high school agricultural classes. These officers also superintend rural science work in the territory adjacent to the high schools having agricultural classes, visiting the public schools and directing nature study and school garden work.

A course of study intended to cover at least two years in the high school has been prepared and is now being followed out in these schools. It includes the study of soils, fertilizers and drainage, fodder, grain, and root crops, vegetable and flower gardening, fruit-growing, animal husbandry and poultry-keeping, dairying and bee-keeping, farm accounting and marketing, farm mechanics (for boys only), and special practice in the purchase and preparation of food (for girls only).

The course as planned is presented in the most practical and scientific manner possible, emphasis being placed on first-hand studies by the students themselves in the laboratory and experimental garden. This "concrete" and practical method of study is still further practised by having the students take occasional class periods to visit convenient farms, orchards, or poultry ranches, where under the immediate direction of their instructors they observe and record in their note books important points brought out in this outdoor lesson.

Teacher Training.

Teachers in training at the two normal schools of the province, are granted certificates without any definite requirements as to their knowledge of agriculture. Special qualifications in agriculture are given only to those who attend the summer school. At the present time a new and tentative course in nature study, school gardening and elementary science is being tried out in the Normal Schools.

Summer schools for teachers are held each year in the city of Victoria. Rural science and household economics are included in the courses. During 1914 and 1915, 359 teachers took the rural science course. In 1916 the summer school was omitted, but in 1917 it was continued as usual, when 70 teachers took the course in rural science. The course in rural science, preliminary and advanced, includes elementary agriculture, nature study, school gardening and forestry. Class-room and laboratory work is supplemented by field studies and practical work in the school garden. Frequent excursions to farms and parks in the vicinity of Victoria are arranged. A rural science certificate is given to those who complete the first year course, and a diploma to those who complete the second year. These special qualifications entitle teachers to bonuses as teachers of rural science. Free transportation to the summer school is provided.

School Gardens.

The school garden is beginning to play an important part in the teaching of nature study and elementary agriculture. In 1917, 283 school gardens and 211 home plots were conducted. Allowances of instruction funds are made to municipalities to help meet the cost of seeds, fertilizers, labour, summer care, tools, related literature. A sum equal to fifty per cent of the departmental allowances is asked from school boards from their own funds.

NOVA SCOTIA.

For the training of teachers in agriculture in Nova Scotia a rural science school is provided at Truro by the Department of Education. Two sessions are held each year, one during April and May and the other during July and August. The course is given jointly by the staffs of the Normal College and the Agricultural College, both located at Truro.

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The teaching of agriculture in the schools is under the supervision of a director of rural science. The work is steadily developing, and in order to better organize and cope with it the director found it necessary to engage two travelling rural science teachers in 1917. This move was attended by such good results that he contemplates increasing his staff of assistants to five in 1918.

The following data for 1917 illustrate the extent of the development of the work in the schools and the enthusiasm shown by the teachers and pupils:

Schools doing special work in elementary agriculture.. . . .	200
Home gardens.. . . .	4,176
School gardens.. . . .	200
Local school fairs (single schools).... .	70
Schools exhibiting at county fairs.. . . .	60
Schools exhibiting at provincial exhibition, Halifax.. . . .	55
Schools exhibiting garden produce.. . . .	160

This spring a number of small teachers' institutes were held in different parts of the province, to talk up rural science work and give practical hints upon carrying on the work in the schools. Home gardening is stressed much more than school gardening in Nova Scotia.

NEW BRUNSWICK.

In New Brunswick, the elementary agricultural educational work, in all its phases, including the rural science and short course schools and the teaching of agriculture in the schools, comes under the Department of Agriculture.

The teaching of agriculture in the schools is optional, but to assist in and encourage the development of this side of the work, bonuses are given to teachers in accordance with their qualifications, the time devoted to the work during the year and the efficiency of the work done. School districts also receive bonuses, if they qualify for them. The bonuses to both teachers and schools naturally vary quite widely. For the last full year for which data are available—that ending at mid-summer, 1917—the bonuses to teachers totalled about \$2,700, and those to schools a little over \$1,800.

Rural Science and Short Course Schools.

Two sessions of the Rural Science School were held, simultaneously, at Sussex and Woodstock in 1917. Classes opened July 10 and closed on August 10. At Sussex, there was a class of 53, and at Woodstock 44.

In January, 1918, a short course of a week's duration was held at Woodstock and the attendance was limited almost entirely to those with no previous training along the lines taken up. The purpose of the course was to fit teachers, as much as the limited time would permit of, for taking up rural science and elementary agricultural work in their schools. The attendance, which was 85, taxed the capacity of the class-rooms.

School and Home Garden Work.

This work has been pushed as much as possible from year to year. In 1917 there were about 100 school gardens and 1,700 home gardens, as compared with 19 and 59, respectively, in 1914. In New Brunswick the tendency is in the direction of stressing school rather than home garden work, although much encouragement is given to both.

PRINCE EDWARD ISLAND.

Training of Teachers.

From 1913 to 1916 summer schools for teachers were held at the Prince of Wales College; but there was gradually substituted for these the teaching of rural science

to first and second year students and normal class, during the regular session of the college.

Work in the Schools.

The teaching of rural science, including elementary agriculture, is compulsory, and the aim has been to have all the inspectors and teachers train for and take an interest in the work. The eight inspectors of the province all really act as assistants to the director in the work and the salaries of four of them are paid out of the Agricultural Instruction Act Grant. Bonuses are given teachers in accordance with their training and the extent and efficiency of the work done.

The tendency in the school work of the province is decidedly in the direction of home garden and other home project work.

A household science department was established at Charlottetown in 1917. It is in operation practically throughout the year, and will accommodate twenty-four pupils at a time.

VI. JUNIOR EXTENSION WORK.

SCHOOL FAIRS—BOYS' AND GIRLS' CLUBS.

ONTARIO.

The school fair movement in Ontario has grown year by year, until in 1917 there are no less than 302 school fairs held in the province.

Seeds and eggs are distributed to the pupils. During the past few years, eggs of a bred-to-lay strain of utility breeds of fowls—Barred Plymouth Rock, Rhode Island Red and White Wyandotte, have been distributed pretty well over the province through the medium of the Agricultural Representatives in the school movement. In addition to the great interest aroused among the pupils, and parents also, in poultry rearing on the farms, the bred-to-lay chickens should have a great influence on the poultry industry of the province. Originally the eggs were obtained through the poultry department of the Ontario Agricultural College. Recently the agricultural representatives have established poultry breeding stations in their respective counties, and practically all the eggs distributed in 1917 were from this source.

The Education Department also undertakes to supply eggs for home project work to schools other than rural where classes in agriculture are maintained. These are procured from the Agricultural College. Under both systems of distribution a nominal charge is made for the eggs.

The following table gives a summarized and comparative statement of the number of fairs, number of children competing, and the number of entries made, with attendance, during the past three years:—

	1915.	1916.	1917.
Number of fairs held.. . . .	234	275	302
Number of schools included.. . . .	2,291	2,620	2,825
Number of children taking part. . . .	48,386	60,262	68,862
Attendance of children at fairs.. . . .	72,860	83,029	86,121
Attendance of adults at fairs.. . . .	84,406	95,217	82,077
Total attendance.	157,266	178,246	168,198
Number of entries.. . . .	116,236	113,263	106,570
Number of home plots.. . . .	51,243	55,947	59,329

In spite of unfavourable conditions in many districts, the fairs were an improvement over last year, not so much in the number, as in the quality of the exhibits. Pupils are taking greater pains in the preparation of their exhibits for the fair, and where size and quantity seemed to be the rule a few years ago, quality is now the outstanding feature.

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In addition to assistance from the Federal grant, practically every organization connected with the rural communities stood behind the school fair and rendered valuable assistance, not only financially, but in the conduct of the various special features. The boards of agriculture donated silver cups or shields; the women's institutes assisted in conducting refreshment booths in aid of the Red Cross, and undertook in some cases to supply judges for the girls' work in baking and sewing; the Junior Farmers' Improvement Association had complete charge of some of the live stock competitions conducted at the fair, and the trustee boards and the township councils were generous in making grants to enable the rural school fair associations to pay for prizes.

The Rural School-Fair Association.

Special mention should be made of the Rural School Fair Association itself, which is composed of representative pupils from each school in the district, who were elected by ballot by their own school. The accredited delegates from each school meet, form a rural school-fair association, and elect officers. The school-fair officers meet perhaps twice during the season to discuss matters pertaining to the welfare of the fair. Special duties were assigned each officer and director and their assistance was of untold value. The splendid business training these boys and girls thus received will no doubt stand them in good stead in future years.

Special Features.

The special features worthy of more than a passing note are the live stock judging competitions for teams of three boys from each school, who are asked to judge two classes of live stock, generally beef or dairy cattle and heavy horses; the public speaking contests in which from two to ten boys and girls compete; the boys' and girls' driving contest, which includes hitching and unhitching; the school fair parades; physical drill under the Strathcona Trust; weed and apple naming contests, and the exhibition of calves and colts led by the boys who spent considerable time training their pet animals.

Special mention should be made of the "Children's Tag Day" at the school fair, when patriotic buttons were sold by three girls from each school. The response in most districts was generous. Last year \$5,518.14 was collected from the sale of these buttons, and, after deducting expenses, a motor carryall costing \$2,000 was purchased and donated to the Military Hospitals Commission, to be used specially to convey wounded soldiers from the hospitals to the Vocational Training classes at the University. The inscription on the plate of the carryall bears these words: "*The children of the rural school fairs in Ontario, Canada, organized by the Ontario Department of Agriculture, donated this car with proceeds secured from the sale of patriotic buttons at the rural school fairs, held in the province, 1916.*" The balance of the proceeds was handed to the Soldiers' Aid Commission, to be used to relieve special cases of distress of returned men.

QUEBEC.

Forty-one school fairs were held during the year 1917 in the French-speaking counties of the province of Quebec. Products were exhibited by nearly 115,000 children. Both children and parents displayed marked interest, and those in charge of the movement are of opinion that the fairs constitute an important factor in the agricultural progress of the province.

In September, 1917, twenty-one Protestant school fairs, in which Macdonald College co-operated, were successfully carried through as a result of a year's careful planning on the part of the organizers and of the children. This was an increase of eight over the previous year, and with scarcely an exception each fair was larger. Settings of eggs and seeds were distributed among 4,893 school children.

The School of Household Science at Macdonald College interested itself in the sewing, canning and cooking exhibits with excellent results. As a consequence of the canning instruction, hundreds of homes were supplied with fruit and vegetables for the winter months. Many of these homes were formerly strangers to such foods.

For school fair work, the college offers eggs from one breed of fowls, and vegetables seeds from certain approved strains. The college is managing, through the school children, to interest the farmers in establishing a root seed industry. This is very important, as ninety per cent of our mangel seed formerly came from Germany. The college also offers potatoes and two or three kinds of corn of varieties that have been approved. For example, the Quebec yellow corn, which ripens in the province of Quebec, is one of the earliest corns produced. The college has improved it in quality and size and has distributed it to the children, after refusing it to dealers at \$100 per bushel. The college has distributed several varieties by this means. This has attracted the attention of parents, and little difficulty is found in getting prizes for school children.

MANITOBA.

Probably no phase of agricultural extension work has developed so rapidly in Manitoba as the boys' and girls' clubs, and it is now evident that expenditure of both money and energy in this work is accomplishing gratifying results.

The membership, 15,000 in 1917, is now 25,000. Four years ago it was 750. The total school population in Manitoba is 103,000, and when we deduct 40,000 the number in attendance at Winnipeg and Brandon schools, and probably another 15,000 who are under ten years of age and consequently too young for boys' and girls' club work, it will be seen that the 25,000 enrolled in boys' and girls' club work, includes almost all the children of the province who would naturally be expected to take an interest in the subject.

Hitherto work has been carried on in connection with the public schools, and its success is largely due to the unselfish support of the teachers of the province. This year, every high and consolidated school took part. In this work the Department of Agriculture, and the Department of Education co-operate and as a consequence there is no duplication of effort and the best support of all branches of both departments is freely given at all times. An effort is made to correlate the educational and economic phases, so that those engaged in the contests may receive instruction in agriculture and home economics.

In organizing clubs the plan followed is to co-operate with teachers, public school inspectors and prominent business men and farmers. A central club is usually organized at the natural marketing centre of the district. Its officers consist of an organizer, or general manager, president or secretary. The duty of the central club is to organize and direct the activities of the branch clubs established at each of the rural schools within a radius of from four to twelve miles. The president and secretary of both the central and branch clubs are usually selected from the older members of the club. While the school is the centre, the membership is not confined to the pupils. The older boys and girls of the district are eligible to membership, the age limit being from seven to eighteen.

The contests and fairs in connection with boys' and girls' clubs are concerned with agriculture and homemaking, and members may enter at the age of ten. Of course the educational value of a club contest in the case of a child of ten is to be found chiefly in the play element. But the boys' and girls' club movement promises to exercise a strong influence upon the school and home activities of young people. The inspectors here recognize the danger of too early specialization and over-absorption in one branch of study to the detriment of the rest, and they desire to limit strictly the number of contests which children, particularly young children, should be permitted to enter. Moreover, while recognizing to the full the value of the boys' and girls'

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clubs and the great practical results of the movement, they express the belief that the educational possibilities of the work are not limited to individualistic and vocational elements alone. During the elementary school age, especially, the general educational bearings of this form of instruction in agriculture and homemaking should be regarded as of chief importance, and in the later years of school life the socializing and liberalizing value of agriculture should not be over-shadowed by the vocational. The experience with book courses in elementary agriculture is not any more encouraging here than elsewhere. As the local or branch clubs are formed, with the school as centre and the teacher as guide, philosopher, and friend, an effective combination is brought about. Nature study, elementary science, agriculture, can be directed and studied in the school garden and the school library. The agricultural laboratory of the country school is in the school and home garden, and the motive of the practical work is in the contests of the boys' and girls' clubs.

The activities of the clubs were carried on along twelve lines of contests; the approximate enrolment in the main contests being as follows:—

One-half acre of pure seed growing..	900
Gardening and canning..	5,000
Poultry rearing..	2,500
Garment making..	3,000
Cookery..	3,000
Pig, calf or colt rearing..	2,000

The juniors, for the most part, engage in poultry keeping and gardening while the older pupils find most interest in the pig and calf rearing contests and in growing registered seed. This year, several of the larger clubs had over fifty members rearing pigs and forty rearing calves. Besides the above there is a large enrolment in manual training, noxious weeds contest, and essay writing contest.

The junior seed growers received sufficient wheat, oats, barley, corn or fall rye for a half acre plot. It was stipulated that the work be done entirely by the boy. These plots were inspected by competent men and the boy instructed in the principles of selection. From this half-acre plot the boy or girl selects sufficient heads of the most desirable type for his quarter-acre plot next year. Besides the prizes given at the local Boys' and Girls' Club Fair, \$150 in prizes were awarded at the Provincial Seed Fair. The exhibit consisted of a half bushel of grain and a sheaf.

How the competitions are operated.

In the gardening contest, potatoes, peas, and beans are the main crop. Improvement in form and quality and yield is aimed at. Altogether 725 bushels of potatoes and 10,325 pounds of peas and beans were distributed. Canning demonstrations were given at most of the centres, practically all of the surplus vegetables were canned.

A local bank has given able support to the movement, and it is largely due to this interest that so many pigs were in evidence at many of the fairs. The managers frequently lend money to the boys and girls to buy pigs, taking as collateral only the boys' and girls' own note. Last year every note was promptly redeemed on maturity. The boy or girl purchases a pair of young pigs in the spring, has their weights certified by an officer of the club, and then feeds them through the summer, keeping an accurate record of the kinds and amount of feed used. On the day of the fair the pigs are again weighed and their records handed to the director of the contest as a guide to the judge in making the awards. The pigs are often sold on the day of the fair, and they readily command the highest market price. The profit is the boys. It is no longer "Johnny's pig and Daddie's pork."

Poultry rearing is a valuable contest, and is resulting in much improvement among the poultry flocks throughout the province, as well as furnishing valuable training to the members. Anywhere from fifteen to seventy-five exhibit coops of poultry may be seen at the local fairs.

Short courses in manual training.

In connection with the manual training work twenty short courses were held during the summer, each of two weeks' duration. These were conducted by the regular manual training teachers of the province. Such lumber as could be obtained locally (even packing boxes were sometimes commandeered) and improvised benches were used. The only tools used were those that they could obtain at home. Each boy and girl made from three to six useful articles which would have done credit to a boy working in a fully equipped manual training room. Nor is the girls' work forgotten. Twenty short courses extending over two weeks each were conducted in cookery and sewing. The exhibits in cooking and sewing at the fairs attracted much comment both for their number and excellence. A notable feature of the fairs is the number of prizes won by the girls for poultry, calf and pig rearing. About 160 fairs were held, the Extension Service furnishing judges.

Bulletins circulated.

The following valuable bulletins were prepared and published this spring for the use of club members in their respective contests:—

Seed Growing.—Professor T. J. Harrison.

Pig Raising.—Professor F. Jacobs.

The Home Garden.—W. T. G. Weiner, B.S.A., and J. A. Neilson, B.S.A.

Garment Making.—Miss Blackburn

Canning by Cold Pack Method.—Prof. C. H. Lee and Miss R. M. Atkinson.

Five thousand club handbooks were distributed during the year, at a cost of fifteen cents per copy.

Last year the boys' and girls' clubs were represented by fifty-one entries at the Manitoba Soil Products Exhibition. The quality of the grain shown indicates that before long they will be formidable competitors for the chief prizes.

SASKATCHEWAN.

In Saskatchewan, school fairs are under the direction of the Department of Education. For the purposes of administration, the province is divided into two parts, north and south, with a director of school agriculture in charge of each. The members of the Rural Education Associations co-operate, as do the agricultural representatives and the staff of the College of Agriculture. Of other agencies, the agricultural societies have given the greatest assistance, sometimes by organizing the school fair, again by support and financial backing, making the work of fair committees less difficult, and very frequently by enlarging their own prize lists so as to include school work. The grain growers', homemakers' and women's grain growers' clubs and individuals interested in boys' and girls' work aid the movement.

The school fair is looked upon as an exhibition of the whole work of the school, and its programme has steadily developed toward that end. Prominence is being given to singing, original story telling, sports and games, so that while agriculture, gardening, household science and handwork hold the larger place and will doubtless continue to do so, the tendency is to develop a programme that will give the public a true idea of the whole range of school activities.

No financial aid in the way of grants is given, and the movement is chiefly dependent for its success and support upon local initiative and enthusiasm. By making the fairs dependent on the interest and support of the local community, it is the expectation that they will continue as a permanent and valuable feature of the educational system. Some 35,000 children and a like number of adults took part in the 150 school fairs held in the province in 1917.

Boys' and girls' clubs.

In 1917, sixty boys' and girls' clubs were in operation in the province, and it is the desire of the Department of Agriculture to extend this movement and to make it a greater educational force. Mr. T. G. Rayner, B.S.A., formerly agricultural representative at North Battleford, was appointed, early in 1918, as assistant director of extension at the College of Agriculture. It is intended that he shall devote his attention to this phase of the work with a view to reaching every boy and girl who is not linked up with some organization whose object is to supplement the work of education.

ALBERTA.

The work in connection with the school fairs in the province of Alberta followed much the same lines as in previous years, but it has expanded considerably both with respect to the number of fairs held and with respect to the work carried on. During 1916 the number of schools organized for school fair work was only eighty-five; during 1917 one hundred and sixty-six schools were included, an increase of over 80 per cent. In addition to there being a larger number of schools, there was also a decided improvement in interest on the part of the public, and the attendance was very large, in some cases reaching up to about two thousand people, and in the majority of cases running from four to eight hundred. The quality of interest, likewise, was much greater than in the case of the ordinary mixed district fair. The limitation in the classifications and the fact that the work was done by children both led to a concentration of attention on the kind of work that is being done.

The standard classes of competitions among the pupils of each school included potatoes, carrots, beets, parsnips, turnips, mangolds, peas, bouquets of cut flowers and chickens. There was an improvement shown in such matters as grading of potatoes, and in the smoothness and quality of all classes of garden products. The household science work included sewing and embroidery and darning; the making of tea biscuits and cakes; the canning of vegetables and fruits, and the preparation of school lunches. In grains, prizes were offered for sheaves of wheat, oats and barley. The live stock classes were represented by pail-fed dairy heifers; pail-fed beef heifers and steers, and halter-broken and groomed foals. In addition to this, in all the fairs there were numerous miscellaneous classes differing in different districts according to the tastes of donors and directors of the fairs. They included such matters as collections of weeds, collections of insects, collections of sewing, pure-bred calves, mixed stock exhibits by school pupils. The exhibits in all cases were superior to the exhibits of the same kind ordinarily brought out by adults.

At the Olds Fair there was a fine exhibit of hogs, which was provided for by the co-operation of the district agent with the manager of the Bank of Commerce. The pig-growing contests is really a miniature farm enterprise, which includes financing, feeding, breeding and selling. Each boy or girl wishing to enter the competition borrows sufficient money from the bank to buy two pigs. He feeds the pigs during the summer and sells one of them to retire the note, which bears 6 per cent. The bank also gives prizes amounting to 6 per cent at the fall fair. The other pig is kept for breeding purposes, and the success or failure of this work will have to be told the following year. All the animals shown give evidence of good care and attention and while the original pair only cost thirty-two dollars, some of the single pigs sold as high as forty-five dollars on the day of the fair.

In addition to the school fairs held directly under the supervision of the agricultural representatives there were a number of small fairs held in the province under purely local patronage, and many of these possessed an interest quite equal to those held under official direction. Altogether twenty-one fairs were held in 1917. In 1918, Mr. E. S. Hopkins will take charge of the school fairs and will secure the co-operation of inspectors and teachers.

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Pig club work is under the direction of the principal of the Olds School of Agriculture. The plan followed is for the department organizer to purchase the stock, distribute it, give instruction in the care of it, arrange the fair prize list and supply judges. The local banks finance the young people, and contribute to the prize list.

BRITISH COLUMBIA.

School Fairs.

Up to the present there has been no general movement for the establishment of school fairs. Where the produce of school and home gardens has been exhibited, it has usually been in connection with the regular fall fair. At Chilliwack the movement began in 1915 with a display of school and home garden produce at the regular exhibition, and in 1917 developed into a school fair for the reason that the regular fair was not held that year. School fairs and school exhibits at regular fairs numbered 15 in 1917.

Boys' and Girls' Clubs.

Boys' and girls' clubs work in British Columbia has consisted hitherto of competitions for boys and girls conducted by the Department of Agriculture through the medium of the farmers' institutes. These competitions are not connected with the teaching of agriculture through the schools or with the school fairs, but the exhibits are sent to the provincial seed fair either at Armstrong or at New Westminster.

In 1914, the British Columbia department organized and conducted boys' and girls' potato-growing competitions. The results were so gratifying that they were continued in 1915, 1916 and 1917.

In 1917 five competitions as follows were organized, open to the members of boys' and girls' clubs organized within the province:—

1. Potato-growing.
2. Corn-growing.
3. Pig-rearing.
4. Poultry-rearing.
5. Calf-rearing.

Cash prizes were offered in each class. Provincial sweepstakes were also established for those securing the highest number of points in the different competitions. The winners were given a choice of prizes (1) a pure-bred pig, (2) a pen of pure chickens, and (3) a set of agricultural reference books.

The boys' and girls' club organizing and conducting the most successful competition or competitions, judged according to the total number of competitors, financial report and an essay, received from the Department of Agriculture a library composed of eight of the best agricultural periodicals published, to be circulated among members of the club.

NOVA SCOTIA.

The school fairs showed a marked improvement last year in Nova Scotia. Not only did the number increase, but the quality of the exhibits surpassed that of previous years.

In 1917, 55 schools sent rural science exhibits to the Provincial Exhibition, 60 to the County Exhibition, and 70 exhibited locally. Deducting those who exhibited at more than one place, 160 different schools exhibited their produce. This is about 6 per cent of the schools in the province.

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NEW BRUNSWICK.

There were 14 school fairs held during 1917. The number of schools represented at the different fairs varied from 1 to 5, the total being 23.

The two main features of the home project work of 1917 were a Poultry and a Potato Growing Competition.

PRINCE EDWARD ISLAND.

School-fair work is developing quite rapidly. In 1916 four fairs were held. In 1917 there were 14 fairs held, and at these 83 schools were represented, or practically 6 schools to a fair. In the school fair work the aim has been to make it as highly educational as possible, and with this end in view the boys and girls undertake much of the executive work.

Boys' and girls' club work in Prince Edward Island has been placed in the hands of the Rural Science Department. It is just in its infancy. The only organization of this nature in 1917 was the "Prince of Wales College Boys' Potato-Growing Contest." In all, 35 boys entered the contest, and in the fall a school fair, featuring the contest, was held at the college.

Plans were made during the winter for the organization of boys' and girls' poultry and pig clubs and these are receiving the hearty support of the egg and poultry and live stock associations. Eggs are supplied the poultry clubs from inspected flocks.

Clubs may be organized only at school fair centres. Fifteen poultry clubs and several pig clubs have been formed.

VII. AGRICULTURAL SCHOOLS.

VOCATIONAL SCHOOLS OF AGRICULTURE.

A recognition of the need for facilities for training farm boys and girls for the pursuit of agriculture and for rural life is responsible for the establishment of vocational schools of agriculture with the assistance of the Federal grant. To qualify for farm life is the leading object of such institutions, and in each of these schools the study of agriculture is the leading feature of the course of instruction. In order to be successful, schools of this character aim to develop a purely agricultural atmosphere. To accomplish this, not only must the teacher be in active sympathy with the purpose of the schools, but the subjects taught should be of direct utility in equipping the student for the vocation of farming. The schools of agriculture will lead directly to the farm in the case of a majority of the students. At the same time, they will prepare those who aspire to it for a college course in agriculture leading to a degree, thus tending to relieve the agricultural college of the necessity for providing instruction of an elementary nature, such as the student should have acquired before entering its portals.

THE ALBERTA SCHOOLS OF AGRICULTURE.

Alberta was the first province in the Dominion to institute agricultural schools, designed to meet the needs of young men and women from the farm by equipping them for farm life.

In 1913, three schools of agriculture were established by the Department of Agriculture, one at Claresholm, one at Olds, and one at Vermilion.

Each school is located on one of the provincial government's demonstration farms. The farms are half sections of 320 acres, and part of the land is set apart for the use of the schools of agriculture.

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These schools are essentially schools for the training of farmers' sons and farmers' daughters. There is no entrance examination and no fee, and they offer to a great many young people of the province the only opportunity open to them for improving their education.

The fact that these schools are distributed over the province one being in the south, one towards the central portion of Alberta and the other one east of Edmonton has made them accessible to a greater number of students than would be a centrally located agricultural college.

The two year course of instruction is similar to that given during the first two years at an agricultural college, and in order to enter the Alberta Agricultural College it is necessary that the student shall have taken the course at a school of agriculture,

The reasons for the establishment of these schools were explained somewhat fully at the time by the Alberta Minister of Agriculture, the Hon. Duncan Marshall. Mr. Marshall pointed out that the only education the ordinary farm boy gets is what he secured at the rural public school and that in many cases the training was indifferent both as to quality and quantity. After the boy had ceased attending school for some time, he awakened to the fact that he was very poorly equipped for his life work. Not having a sufficient knowledge of agriculture to make farming attractive to him, he too often left for the city in the hope that he might find something there that would give him an easier living.

To the boy on the land the agricultural college is usually a non-attainable thing. It appeals to the few who wish to qualify for agricultural teaching or leadership, rather than to the many who are looking to farming as a means to a livelihood. The purpose of the Schools of Agriculture is to bring right to the doors of the farm boys and girls an opportunity to study the business that offers them the best opportunities, namely, farming.

The aim of the teaching is to make the work relate to the actual work of the farm. Special emphasis is therefore laid on live stock, grain, dairying, poultry-keeping, veterinary science, and farm mechanics. This is supplemented by instruction in English mathematics, farm book-keeping, farm management and the sciences in order that the general educational equipment of the student may be improved.

In the household science department of the schools, young women are instructed especially in home economics. The first session of the two year course is devoted to home problems, and the second year's instruction is designed for those who are preparing to teach household science. The popularity that the schools have enjoyed appears to indicate that they are meeting a very real demand so far as Alberta is concerned. As time goes on and the number of schools increases, it is probable that they will exercise a marked influence, not only on the development of agriculture, but also on the citizenship of the province.

During the summer months the members of the staffs, whenever available, are used in extension work among the farmers. They give attention to the cow-testing competitions conducted annually by the department, judge at fairs, address farmers' gatherings, assist with school gardens and school fair work, as well as in various other capacities.

The province avails itself of the financial assistance rendered by the Agricultural Instruction Act to provide from this source the greater portion of the funds needed to equip and maintain these schools, but, with minor exceptions, the cost of the buildings themselves was provided by the province.

The schools maintained their attendance during the year in spite of the scarcity of labour and the large number of enlistments among the boys of the farm. A conference was held at the close of the schools in the spring of 1918 in which the courses were reviewed and a number of changes instituted. The subjects added were civics and rural economics for boys and rural organizations for girls.

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Course for Returned Soldiers.

At the Olds school a ten months' special course was offered in 1917 to veterans with the idea of assisting them to qualify for settlement and to engage successfully in agricultural pursuits.

THE NEW BRUNSWICK AGRICULTURAL SCHOOLS.

When aid was first extended by the Federal Government for the advancement of agricultural instruction, the nearest institution at which students from the Maritime Provinces could secure a course of training in agriculture was the Nova Scotia Agricultural College, Truro. It was felt that, so far as a college course was concerned, this institution might very well be made to meet the needs of the three provinces in question by strengthening its teaching staff and by providing certain buildings and equipment of which the institution stood greatly in need. It was proposed in addition that New Brunswick and Prince Edward Island should erect and conduct agricultural schools, where less advanced courses in agriculture could be provided, leading either to the farm or to the agricultural college.

In New Brunswick three such schools were contemplated, one at Woodstock, another at Sussex and a third in the northern section of the province. Two of these have since been built. The Fisher Vocational School at Woodstock was presented to the province in 1914 by the Fisher estate, on the understanding that the province should equip and maintain the institution and make provision for an agricultural department. Instruction Act moneys were allotted for this purpose. A second school was provided at Sussex and opened in 1915, the cost being met by the Federal grant. It has not been found practicable, owing to the war, to conduct regular courses of instruction at either of these schools. The buildings are being utilized at present for holding of short courses for farmers and farmers' sons, for household science courses, and for courses for teachers in nature study and agriculture. In addition, the buildings are being used to provide office accommodation for members of the provincial staff whose work in connection with agriculture and education is most conveniently conducted from these two centres.

THE SCHOOL AT KEMPTVILLE, ONTARIO.

A year ago the Ontario Department of Agriculture decided to erect a school for the benefit of the Eastern Ontario counties. It was felt that the work should not be completed until the conclusion of the war. During the year, however, several steps of importance have been taken with a view to getting the work properly established. A principal was appointed to supervise the work and conduct short courses and such other educational work as might be found practicable. Improvements were made in the farm stock and also in the farm buildings, and a contract was let for the erection of a building to be used as a live stock judging pavilion. This it is expected will be completed in 1918, but will be the only important building undertaken during the war. It is felt that it will serve a useful purpose in providing accommodation for the short courses and other educational work which it may be necessary to carry on pending the completion of the larger plan.

VIII. SHORT COURSES.

LOCAL SHORT COURSES IN AGRICULTURE AND HOUSEHOLD SCIENCE.

ONTARIO.

The short course, now a prominent part of the work assisted by the Agricultural Instruction grant in nearly every province, aims to supply technical information, in condensed form, to those who desire to better equip themselves for some particular line of farm work.

In Ontario, where practically every county in the province now has its resident representative, classes for young farmers have been carried on by these men for a number of years. Where apathy existed, the agricultural representative by personal solicitation induced young men to attend, and a work of great value to the agricultural community has been accomplished. Courses in household science for young farm women are now carried on concurrently with the men's courses. The object of the Ontario courses is not primarily to teach the boys how to farm. The aim is rather to make a study of the principles upon which common every day farm operations are based; to create a greater interest in farm life; to induce the young man to inquire more closely into things; to make him acquainted with new and approved ideas and to instruct him where to seek for the latest information and assistance science can give him in his farm operations.

Lectures are given by the agricultural representatives which are supplemented with practical work in the class room such as testing milk, judging grains and clover seeds, identification of seeds of noxious weeds, pruning and grafting, making of Bordeaux mixture and the visiting of stock farms for practice in judging live stock.

The following is a summarized statement of the Ontario courses in agriculture for the past few years:—

Year.	No. of Courses.	Attendance.
1912..	19	377
1913..	16	346
1914..	28	555
1915..	43	1,114
1916..	36	888
1917..	36	839

In other provinces, where agricultural representatives are not so well established, the usual practice is for a staff of instructors to hold courses according to schedule at various local points. In some instances a number of subjects are featured, such as the operation of gas engines, farm book-keeping, poultry-keeping, etc. Special courses varying in length from one to four weeks are commonly held by the colleges and schools of agriculture at seasons when regular course students are not in attendance.

Related forms of work are the demonstration trains, seed fairs and poultry shows where arrangements are made for specialists to attend and give lectures and demonstrations.

Stock Judging Classes.

In an endeavour to give practical instruction in live stock improvement work, the Ontario Department of Agriculture some ten years ago, organized practical judging courses for farmers and their sons. After a brief talk on such line of the live stock industry as the delegate thinks of greatest value to those in attendance, three or four specimens of the class of stock to be discussed are brought into the ring. After pointing out and discussing the desirable and undesirable characteristics, those in attendance are asked to judge the animals and give systematic reasons to support their opinions. The instructor then gives his placings and illustrates his reasons.

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For a number of years the majority in attendance, including not a few of the experienced stockmen, were reluctant in giving their opinions. The perfect freedom of discussion during recent seasons induces all to present their opinions and problems. Keen and profitable discussion now follows the placing of each class and the experienced as well as the amateur breeder receives valuable instruction.

Some forty-five of these two-day courses with from two to four classes of stock were held during the winter of 1917-18 with an average attendance of 175. This is a considerable reduction as compared with the previous year, due largely to labour shortage and unfavourable weather conditions.

Judges' Courses.

Short courses for training Fall Fair judges and for judges of field crop competitions are provided at the Ontario Agricultural College, Guelph, and at the Central Experimental Farm, Ottawa. Instruction is given in the judging of heavy and light horses, beef and dairy cattle, sheep, swine, poultry, and field crops. By this means men trained to a uniform standard of judging are provided for the 214 fairs held by agricultural societies, and for the 177 societies holding field crop competitions. In 1917, the competitions comprised 3,500 fields of wheat, oats, barley, corn, potatoes, clover, turnips, mangels, beans, and peas. At Guelph, 200 judges were present and at Ottawa 125 took the work.

At Kemptville Agricultural School.

A four-day course in general agriculture was presented at the Kemptville Agricultural School in January, 1918. Dominion and provincial instructors took charge of the classes. This course marked the inauguration of the school as a teaching institution, and was held concurrently with the annual fair for the Eastern Ontario Seed Growers' Association.

QUEBEC.

Winter short courses or demonstration lectures for the French-speaking population of the province of Quebec are held in two series, one covering the northern and the other the southern district. The subjects include every branch of farming, together with poultry and bee-keeping, home and market gardening, various household science subjects, hygiene, and the control of injurious insects and plant diseases. In the north, the work is conducted by the Professors of the School of Agriculture at St. Anne de la Pocatière. In the south, the classes are conducted jointly by officers of the Department of Agriculture and professors from the School of Agriculture. The duration of each course is about one week, lectures being given each morning and afternoon. In the evening, the subjects taken up during the day are usually illustrated by lantern lectures. Many of the lectures were supplemented by demonstrations. This year the northern series covered seven localities and the southern section, eleven localities. In certain districts the severe weather interfered with the attendance at the regular courses, and in a number of parishes supplementary lectures were given from January to April.

The number of agricultural lectures and demonstrations and the aggregate attendance in both sections was as follows:—

	Lectures.	Demonstrations.	Attendance.
Regular courses.	425	32	40,095
Supplementary lectures.	120	22	6,860
	<hr/> 545	<hr/> 54	<hr/> 46,955

In addition to the above certain members of the Staff of the Oka Agricultural Institute gave a number of lectures in various localities during the winter vacation.

Domestic Science Lectures.

Two domestic science instructors accompanied the southern delegation in its short course tour, giving 89 lectures and demonstrations. The aggregate attendance at the series being 6,315.

During the summer of 1917, a similar series of domestic science lectures was held under the auspices of the young farm women's clubs. Twenty localities were visited, and 310 lecture demonstrations given. The aggregate attendance at these meetings was 21,755.

MANITOBA.

Short courses for farmers extending over a period of two weeks are held at local centers by the extension service. In 1917, they were conducted at twenty-one points, being arranged in four circuits with a staff of instructors provided for each consisting of two for gas engines, two for agriculture, and two for home economics. On account of the shortage of farm help, the gas engine course was specially featured, and probably eight per cent of those taking the course were women.

Dairying and Home Economics.

Through the co-operation of the Dairy and Apiary Branches, four day short courses were held at 12 places where dairying is the leading industry. Owing to the fact that the country is not as thickly settled as the districts in which the other courses were held the attendance was not as large. Nevertheless the interest was very keen, and the attendance uniformly regular. In women's work home nursing was very popular, and cookery was the second choice.

For the most part the instruction was confined to live stock breeding and care, particular attention being paid to the dairy herd. The care of milk and cream, and bee-keeping were equally popular among the students. At these courses a particularly wide use was made of charts and lantern slides.

Home Economics Short Course.

In addition to the short courses held in connection with the men's courses a large number of special five-day courses were held in dressmaking, millinery, cookery, home nursing and canning. The number of courses, average attendance and aggregate attendance was as follows:—

	Number of Courses.	Average Attendance.	Aggregate Attendance.
Dressmaking..	65	22	11,890.
Millinery	55	24	10,950
Home nursing..	25	18	3,320
Cookery.. . . . .	..	38	8,756
Canning.. . . . .	..	52	2,895
			<hr/> 37,811 <hr/>

Manual Training Short Courses.

During July the services of eight manual training teachers from the Winnipeg and Brandon Manual Training schools were obtained, and twelve short courses extending over a period of two weeks were held in connection with the boys' and girls' clubs. Binder crates were used to make benches and the boys brought with them such tools as they were able to find on the home farm. The material used was to quite an extent of the same character. The articles made were chicken brooders, feed hoppers, exhibit coops, wagon boxes, hog self-feeders, etc. By using this kind of equipment the boys

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were learning to use the kind of tools, benches, etc., that would be available after the course was over. The aggregate attendance at these courses was over 5,000.

Recapitulation.

	Aggregate Attendance.
Short course schools..	29,963
Dairy courses..	3,152
Home economics courses..	37,811
Woodworking courses..	5,000
Grand aggregate..	75,926

SASKATCHEWAN.

Short courses in Saskatchewan are conducted by the Extension Department of the College of Agriculture, of which Mr. S. E. Greenway is director. Lecturers this year report the most enthusiastic meetings yet held in the province. Of the sixty odd courses held, not more than three or four were found wanting in the matter of interest.

This year poultry work and farm accounting were included in addition to the usual field and animal husbandry work. The demand for greater production and conservation developed more or less technical work regarding rationing, both for man and beast, which was received with surprising avidity. This is especially true in its relationship to the feeding of farm stock, since feeds are so scarce and so costly, and the need of pork products so great. The situation has been largely responsible for the interest in simple farm accounts, as the farmers desire to know, with some degree of definiteness, just whether their operations in the production of pork are going to net them a profit or not.

The method of conducting the seed fairs for a number of years has been to give them very practical short course features. Often poultry shows are held, and, as the activity usually extends over two or more days, much time is given up to discussions, demonstrations, and judging competitions in cereals, animals and poultry.

NOVA SCOTIA.

Short courses covering all phases of agricultural instruction are held each year in January at the Agricultural College, Truro. The enrolled attendance was 180 and in addition there were several one or two-day conventions and a very considerable intermittent attendance which would bring the total number who took advantage of the educational work up to about 350.

From the standpoint of the work done, and of the interest taken, the staff are unanimous in considering the 1918 short course to have been the best yet given at the College. Special attention was given to the matter of the using of the best kind of seed, and the improvement of the live stock of the country.

In addition to the above, short courses are held at numerous local centres, including those where agricultural halls have been established.

In May, 1917, a week's short course was conducted at Lawrencetown, Annapolis county, the lines followed being somewhat the same as those in the later course at Truro. This course proved so satisfactory that another was asked for and given in March of this year, at which the attendance was about 100. Similar courses were held during March at Middletown (attendance 100), Annapolis (attendance 75), Bridgetown (attendance 75), and Guysborough (attendance 100).

Food conservation and preservation lectures, with demonstrations in canning, etc., were given during the winter at various points in the province. At the Halifax Exhibition, which extended over a period of two weeks, the superintendent of women's institutes gave canning demonstrations daily.

FINANCIAL STATEMENTS.

1. ALLOCATION OF AGRICULTURAL INSTRUCTION GRANT OF 1917-18,
UNDER AGREEMENTS WITH PROVINCES.

ONTARIO.

Grant of 1917-18

AGRICULTURAL COLLEGES AND SCHOOLS.

1. Ontario Agricultural College—	
(a) Buildings, equipment and furnishings..	\$75,000 00
(b) Salaries and expenses, additions to staff, maintenance..	15,000 00
	<hr/>
	\$ 90,000 00
2. Agricultural School: Capital expenditure, including land purchase, buildings and equipment, and the services and expenses pertaining thereto..	50,000 00

INSTRUCTION AND DEMONSTRATION.

3. District representatives: including clerical and other assistance in connection with the administration.. . .	120,000 00
4. Co-operation and markets: Educational work in connection with the marketing of farm products, including organization of co-operative societies..	4,500 00
5. Demonstration and instruction in vegetable growing. . . .	6,000 00
6. Stock and seed-judging short courses and institute lectures.	2,500 00
7. Women's institute work, including courses in cooking, sewing, etc..	7,500 00
8. Short courses for fall fair, field crop and poultry judges: including travelling and living expenses..	4,703 26
9. O.A.C. short courses for winners of acre profit and live stock competitions, including travelling and living expenses..	3,000 00
10. Lectures on horticulture..	800 00
11. Demonstrations, with vegetables and hardy fruit in New Ontario..	1,000 00
12. Vineland Horticultural Experiment Station: Experimental work, canning..	2,500 00
13. Drainage work..	6,500 00
14. Demonstration work on soils..	3,900 00
15. Bee-keeping..	800 00
16. Instruction and special educational work in growing and handling of corn..	2,600 00

ELEMENTARY AGRICULTURAL EDUCATION.

17. To provide for and to encourage the teaching of agriculture, manual training as applied to work on the farm, and domestic science in high, public, separate and continuation schools and in universities, to be available for grants, services, expenses and equipment, and travelling and living expenses of teachers, inspectors and other in attendance at short courses or other educational gatherings, and to be paid out on the recommendation of the Department of Education.. . .	30,000 00
	<hr/>
	\$336,303 26

QUEBEC.

Grant of 1917-18.

A. COLLEGES AND SCHOOLS OF AGRICULTURE.

1. Grants and allowances: Macdonald College, Ste. Anne de la Pocatière; School of Agriculture, Oka Institute.. . .	\$ 75,000 00
2. School of Veterinary Science, building extension.. . . .	5,000 00

B. DEMONSTRATION AND INSTRUCTION.

3. Breeding: Educational work in horse-breeding, cattle and sheep-raising..	7,000 00
4. Poultry: Instruction and demonstration..	18,000 00

E. DEMONSTRATION AND INSTRUCTION—*Concluded.*

C. ELEMENTARY AGRICULTURAL EDUCATION.

MANITOBA.

INSTRUCTION AND DEMONSTRATION.

SASKATCHEWAN.

A. COLLEGE OF AGRICULTURE.

B. INSTRUCTION AND DEMONSTRATION.

C. ELEMENTARY AGRICULTURAL EDUCATION.

11.	Agricultural instruction in public, high and normal schools ; household science; training of teachers; nature study; school gardens.. . . .	25,000 00 2,576 48
12.	School fairs.. . . .	<hr/> \$ 81,728 48

ALBERTA.

Grant of 1917-18.

A. SCHOOLS OF AGRICULTURE.

1. Maintenance, salaries, expenses..	\$ 35,000 00
2. Equipment..	2,000 00

B. INSTRUCTION AND DEMONSTRATION.

1. Demonstration farms: Buildings, purchase of stock.. . . .	8,000 00
2. Demonstration trains..	5,000 00
3. Dairying: Dairy competitions and prizes.. . . .	1,500 00
4. Publicity: Printing and publication of bulletins.. . . .	2,400 00
5. Women's work..	4,500 00
6. District agents..	8,500 00
7. Miscellaneous..	65 62
	<hr/>
	\$ 66,965 62

BRITISH COLUMBIA.

Grant of 1917-18.

A. INSTRUCTION AND DEMONSTRATION.

1. Agricultural and horticultural instructors and district representatives..	\$ 3,500 00
2. Field crop demonstration stations..	8,000 00
3. Horticultural demonstration stations..	3,000 00
4. Poultry demonstration stations and egg-laying contests ..	1,500 00
5. Alfalfa plots..	500 00
6. Silo demonstrations..	3,000 00
7. Drainage demonstrations..	1,000 00
8. Seed distribution and co-operative variety tests, seed production, seed fairs..	5,500 00
9. Dairying: Cow-testing associations..	3,000 00
10. Bee-keeping..	2,500 00
11. Field crop competitions..	2,000 00
12. Boys' and girls' clubs..	1,000 00
13. Fruit-packing schools and demonstrations..	1,000 00
14. Market work..	4,500 00
15. Agricultural Journal; Publication Branch	5,000 00

B. INVESTIGATION AND RESEARCH.

16. Pathological and entomological investigation and research.	2,000 00
17. Weed investigation and survey..	1,500 00

C. ELEMENTARY AGRICULTURAL EDUCATION.

18. Agricultural instruction in public, high and normal schools, household science, training of teachers, grants.. . . .	20,000 00
19. Contingencies and miscellaneous..	699 06
	<hr/>
	\$ 69,199 06

NOVA SCOTIA.

Grant of 1917-18.

1. Colleges and schools of agriculture: Capital—Science building, construction and furnishings, interest and sinking fund..	\$ 8,000 00
2. Salaries and maintenance..	23,000 00
3. Demonstration and instruction: District representatives..	9,500 00
4. Short courses: Demonstration buildings, maintenance, allowance to students..	2,400 00
5. Dairying..	3,500 00
6. Poultry..	1,500 00
7. Bee-keeping: Educational work..	600 00
8. Drainage: Demonstration and soil survey..	1,500 00
9. Soils and fertilizer demonstration..	1,500 00
10. Field crop demonstration..	1,500 00
11. Fruit growing..	2,000 00
12. Women's work: Institutes and clubs, domestic science, short courses and allowances..	3,000 00

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NOVA SCOTIA—COLLEGES AND SCHOOLS OF AGRICULTURE—*Concluded.*

13. Entomological work: Horticultural and entomological investigation, and education re insect pests.. . . .	\$ 10,000 00
14. Elementary agricultural education: Agricultural instruction in public, high and normal schools, training of teachers, allowances and grants.. . . .	10,000 00
15. School children's exhibits and competitions.. . . .	2,000 00
16. Contingencies and miscellaneous.. . . .	1,716 69
Total.. . . .	<u>\$ 81,716 69</u>

NEW BRUNSWICK.

Grant of 1917-18.

INSTRUCTION AND DEMONSTRATION.

1. District representatives.. . . .	\$ 13,500 00
2. Bee-keeping.. . . .	900 00
3. Soils and drainage.. . . .	4,000 00
4. Horticulture.. . . .	6,500 00
5. Short courses.. . . .	1,300 00
6. Live stock.. . . .	7,000 00
7. Dairying.. . . .	4,000 00
8. Poultry.. . . .	2,100 00
9. Fertilizers.. . . .	2,000 00
10. Entomology.. . . .	1,300 00
11. Agricultural societies.. . . .	4,000 00
12. Women's institutes.. . . .	6,000 00

ELEMENTARY AGRICULTURAL EDUCATION.

13. Agricultural instruction in public, high and normal schools, household science, training of teachers, allowances, grants.. . . .	9,785 80
14. School fairs.. . . .	1,725 00
Total.. . . .	<u>\$ 64,110 80</u>

PRINCE EDWARD ISLAND.

Grant of 1917-18.

A. BUILDINGS ACCOUNT.

1. Agricultural buildings—equipment and maintenance.. . .	\$ 2,950 00
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B. INSTRUCTION AND DEMONSTRATION.

2. Director and district representatives.. . . .	7,000 00
3. Short courses.. . . .	250 00
4. Drainage and soils.. . . .	3,600 00
5. Dairying.. . . .	2,400 00
6. Bee-keeping and fruit growing.. . . .	300 00
7. Women's Institutes, household science, short courses, grants and allowances.. . . .	3,500 00

C. ELEMENTARY AGRICULTURAL EDUCATION.

8. Agricultural instruction in public and high schools, training teachers, allowances, grants, manitenance of rural science department, Prince of Wales College.. . . .	9,500 00
9. Miscellaneous and contingencies, including clerical assistance.. . . .	2,249 22
Total.. . . .	<u>\$ 31,749 22</u>

2. AGRICULTURAL INSTRUCTION GRANT OF 1917-1918.

Dates of Payments and Amounts Paid to Provinces.

Ontario.....	May 21, 1917.	\$ 168,151 63
	Nov. 16, 1917.	168,151 63
Quebec.....	June 9, 1917.	135,556 88
	Oct. 30, 1917.	135,556 88
Manitoba.....	May 22, 1917.	10,000 00
	June 23, 1917.	34,556 55
	Jan. 7, 1918.	44,556 56
Saskatchewan.....	Aug. 17, 1917.	40,864 24
	July 24, 1918.	40,864 24
Alberta.....	May 25, 1917.	33,482 81
	Dec. 7, 1917.	33,482 81
British Columbia.....	July 17, 1917.	34,599 53
	Mar. 19, 1918.	29,349 53
Nova Scotia.....	June 4, 1917.	40,858 34
	Nov. 14, 1917.	40,858 35
New Brunswick.....	July 19, 1917.	32,055 40
	Dec. 7, 1917.	32,055 40
Prince Edward Island.....	June 26, 1917.	15,874 61
	Mar. 1, 1918.	15,874 61
Veterinary Colleges—		
Ontario Veterinary College	(No payment).	12,574 85
School of Veterinary Science, Montreal....	Nov. 20, 1917.	7,425 15

3. STATEMENTS, BY PROVINCES, OF EXPENDITURE OF AGRICULTURAL INSTRUCTION GRANT FOR THE FISCAL YEAR ENDING MARCH 31, 1918.

PROVINCE OF ONTARIO.

Grant of 1917-18.

SUMMARY STATEMENT, April 1, 1917, to March 31, 1918.

No.	Classification.	Balance April 1.	Grant	Refunds	Total Credits.	Expendi- ture.	Cr. Balance.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1(a)	O.A.C. capital expenditure.....	55,339 72	75,000 00	...	130,339 72	9,466 32	120,873 40
1(b)	O.A.C. salaries and additions to staff.....	3,355 86	15,000 00	150 00	18,505 86	14,551 92	3,953 94
2	Kemptville Agricultural School.	28,581 34	50,000 00	1,584 46	80,165 80	32,472 85	47,702 95
3	District representatives.....	847 07	120,000 00	726 64	121,573 71	121,528 60	45 11
4	Educational work <i>re</i> marketing.	2,618 55	4,500 00	325 00	7,443 55	7,058 22	385 33
5	Dem. and Inst. in vegetable growing.....	94 61	6,000 00	400 00	6,494 61	6,455 65	39 96
6	Stock and seed judging course and institute work.....	3,140 79	2,500 00	1,395 42	7,036 21	4,573 45	2,462 76
7	Women's Institutes.....	170 76	7,500 00	1,245 20	8,915 96	7,116 22	1,799 74
8	Short courses fall, fair and field crop judges.....	367 74	4,703 26	244 00	5,315 00	4,412 58	902 42
9	O.A.C. short courses, etc.....	24 48	3,000 00	254 50	3,278 98	2,717 95	561 03
10	Lectures on horticulture.....	11 02	800 00	2 70	813 72	383 25	430 47
11	Dem. vegetables, hardy fruits, N. Ont.....	2,361 75	1,000 00	2,575 62	5,937 37	5,570 21	367 16
12	Vineland Horticultural Expt. Station.....	1,261 23	2,500 00	...	3,761 23	2,182 92	1,578 31
13	Drainage work.....	1,655 61	6,500 00	580 70	8,736 31	4,268 03	4,468 28
14	Demonstration work on soils....	514 40	3,900 00	500 00	4,914 40	4,816 80	697 54

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PROVINCE OF ONTARIO.

SUMMARY STATEMENT, April 1, 1917, to March 31, 1918—*Concluded.*

No.	Classification.	Balance April 1.	Grant.	Refunds.	Total Credits.	Expendi- ture.	Cr. Balance.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
15	Bee-keeping	674 07	800 00	200 00	1,674 07	1,057 93	616 14
16	Inst. and special educational work in growing and handling corn.		2,600 00	300 00	2,900 00	2,826 94	73 06
17	Elementary agricultural educa- tion	22,763 34	30,000 00	351 75	53,115 09	24,116 95	28,998 14
	A. Aid—Livestock in N. Ontario 1914-15—Dem. in live stock and poultry.	3,427 84			3,427 84		3,427 84
	1915-16—Dairy demonstrations. .	901 89			901 89	18 22	883 67
	1915-16—Demonstration work re spraying and pruning	15 81			15 81		15 81
	1915-16—Demonstration work re spraying and pruning	3,197 42	(Less trans fer 2,455 75 to No. 11.)	316 66	1,058 33	958 33	100 00
	A. Aid—Western Ontario cream- ery work	1,131 90			1,131 90		1,131 90
	" Dairy survey	215 51			215 51		215 51
	" Ont. Vet. College, addi- tional land.	13,494 93			13,494 93	675 00	12,819 93
	1913-14—Miscellaneous.	1,869 24			1,869 24		1,869 24
	A. Aid—Milking shorthorns. . . .	1,856 11			1,856 11		1,856 11
		149,886 78	336,303 26	10,952 67	494,893 15	256,618 40	238,274 75
					Less Agricultural Aid balances		19,451 29
							218,623 46

PROVINCE OF QUEBEC.

Balance of Grant of 1916-17.

SUMMARY STATEMENT, April 1, 1917, to June 30, 1917.

No.	Classification.	Balance April 1, 1917.	Expenditure
1.	Poultry Husbandry		
2.	Horticulture.	\$ 6,977 36	\$ 6,977 36
3.	Bacon.	* 1,974 59	1,974 59
4.	Schools of Agriculture	8,443 42	8,443 42
5.	Agricultural Teaching in Academies, Rural and Normal Schools	3,823 58	3,323 58
6.	District Representatives	1,035 57	1,035 57
7.	Experimental Union.		
8.	Clover and Alfalfa		
9.	Seed Selection		
10.	Bee keeping.		
11.	School of Veterinary Science.	5,000 00	5,000 00
12.	Dairying.		
13.	Drainage.	149 85	149 85
14.	Domestic Science.	1,518 50	1,518 50
15.	Maple Sugar	1,656 49	1,656 49
16.	Conferences, etc	1,066 63	1,066 63
		\$ 31,645 99	\$ 31,645 99

* Transferred to No. 6, District Representatives. . . . \$4,000.00.

PROVINCE OF QUEBEC.

Grant of 1917-18.

SUMMARY STATEMENT, April 1, 1917, to March 31, 1918.

No.	Classification.	Grant.	Expenditure	Cr. Balance.
1.	Schools of Agriculture	\$ 75,000 00	\$ 57,399 68	\$ 17,600 32
2.	School of Veterinary Science, building extension	5,000 00	5,000 00	
3.	Breeding.....	7,000 00	3,917 87	3,082 13
4.	Poultry.....	18,000 00	15,740 53	2,259 47
5.	Bacon.	5,000 00	3,716 93	1,283 07
6.	Horticulture.....	30,000 00	29,994 42	5 58
7.	Experimental orchards	5,000 00	4,966 63	33 37
8.	Dairying	25,000 00	23,813 70	1,186 30
9.	Agricultural representatives	40,000 00	39,993 34	6 66
10.	Seed.....	9,000 00	9,000 00	
11.	Bee-keeping.	7,000 00	7,000 00	
12.	Drainage.	8,000 00	8,000 00	
13.	Maple products.....	4,000 00	1,375 27	2,624 73
14.	Short courses	9,113 76	7,914 49	1,199 27
15.	Experimental Union.	2,000 00	2,000 00	
16.	Elementary Agricultural Education.	10,000 00	5,631 54	4,368 46
17.	Domestic Science.....	10,000 00	10,000 00	
18.	School Children's Exhibits	2,000 00	1,401 00	599 00
		\$271,113 76	\$236,865 40	\$ 34,248 36

MACDONALD COLLEGE.

STATEMENT of receipts and disbursements of Dominion Grant for year ending March 31, 1918.

April 1, 1917—Balance (debit) forward.....	\$ 2,947 62
Receipts—	
Instruction Act grant.....	25,000 00
	<hr/>
	\$22,052 38
Disbursements—	
Animal husbandry.....	\$4,862 73
Biology.....	1,006 54
Cereal husbandry.....	2,226 57
Chemistry.....	1,051 90
Demonstrator, Shawville.....	2,209 70
Horticulture.....	1,398 14
Household science.....	2,625 11
Physics.....	700 00
Poultry.....	2,239 41
Veterinary science.....	1,653 40
Rural schools.....	3,751 47
Short courses.....	497 06
General.....	498 64
Sherbrooke Exhibition.....	736 14
	<hr/>
	25,456 81
Debit balance.....	<hr/>
	\$ 3,404 43

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PROVINCE OF QUEBEC—*Concluded.*

SCHOOL OF AGRICULTURE, STE. ANNE DE LA POCATIÈRE.

Expenditure of Federal Grant, 1917-18.

Building extension, annual payment..	\$ 6,000 00
Salaries and allowances, teaching staff..	8,045 00
Administration, wages..	1,745 00
Insurance, heating and lighting..	4,330 00
Allowance for maintenance of students..	2,855 48
Demonstration plots..	2,000 00
Library..	320 00
Dairying..	500 00
Poultry-keeping..	200 00
Incidentals..	397 00
Bacon industry..	450 00
Laboratory expenses..	717 00
	<hr/>
	\$27,559 48

OKA AGRICULTURAL INSTITUTE.

Expenditure of Federal Grant, 1917-18.

Enlargement of College building, annual payment..	\$ 5,000 00
Teaching staff, salaries and allowances..	9,745 00
Administration, salaries and wages..	4,269 70
Insurance, heating and lighting..	2,941 62
Experimental fields..	384 68
Board of students..	1,334 00
Poultry..	100 00
Bee-keeping..	100 00
Horticulture..	200 00
Preserving and canning..	100 00
Animal husbandry, herd improvement..	1,175 00
	<hr/>
	1,675 00
Dusting machine..	410 00
Incidentals..	150 00
	<hr/>
	\$25,910 00

PROVINCE OF MANITOBA.

Grant of 1917-18.

SUMMARY STATEMENT, April 1, 1917, to March, 31, 1918.

Number.	Classification.	Balance April 1.	Grant.	Refunds.	Total Credits.	Expendi- ture.	Credit Balance.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	Killarney Demonstration. Farm and maintenance.....	1,483 04	3,000 00	1,244 67	5,727 71	5,514 66	213 05
2	Dairy work.....		8,000 00		8,000 00	4,950 32	3,049 68
3	Poultry work.....		4,000 00		4,000 00	1,847 77	2,152 23
4	Agricultural Representatives.. . . .	227 63	15,500 00	37 00	15,764 63	8,032 79	7,731 84
5	Boys' and Girls' Clubs.....	32 95	17,000 00	308 60	17,341 55	17,227 10	114 45
6	Short Courses in Agriculture.....	179 41	19,113 11	2 60	19,295 12	15,723 31	3,571 81
7	Home Economics.....	145 54	18,500 00	27 50	18,673 04	18,371 91	301 13
8	Soil analysis and survey		1,000 00		1,000 00		1,000 00
9	Bee-keeping.....		2,000 00		2,000 00	1,612 81	387 19
10	Miscellaneous.....	696 58	1,000 00	* 565 25	2,261 83	2,013 07	248 76
		<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
		2,765 15	89,113 11	2,185 62	94,062 88	75,293 74	18,770 14

Allotment for 1917-18..... \$ 77,113 11
Unappropriated Balance, 1916-17..... 12,000 00

\$ 89,113 11

* From sale of effects, Demonstration plots.

AGRICULTURAL AID ACT.

MANITOBA.

(1912-13.)

STATEMENT to March 31, 1918.

Demonstration farms..	\$ 5,425 90
Demonstration trains..	3,278 45
Agricultural meetings—lectures..	1,046 10
Ploughing matches..	230 98
Poultry industry..	985 20
Grants to agricultural societies..	18,718 65
	<hr/>
	\$29,685 28
Balance unexpended..	2,184 33
	<hr/>
	\$31,869 61

PROVINCE OF SASKATCHEWAN.

Grant of 1917-18.

SUMMARY STATEMENT, April 1, 1917, to March 31, 1918.

Number.	Classification.	Balances April 1.	Grant.	Refunds.	Total Credits.	Expendi- ture.	Credit Balance.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	<i>College of Agriculture.</i>						
1	Staff Salaries, Research and Extension Service.....	13,644 57	22,076 16	548 09	36,268 82	29,551 60	6,717 22
2	Women's work ; Homemakers' Clubs.....		5,500 00		5,500 00		5,500 00
	<i>Instruction and Demonstration.</i>						
3	Co-operation and Marketing.....	1,000 00	4,500 00	696 12	6,196 12	5,998 83	197 29
4	Animal Husbandry.....	2,500 00	4,500 00	274 82	7,274 82	3,146 15	4,128 67
5	Dairying.....	2,656 71	4,800 00	1,253 88	8,710 59	4,965 37	3,745 22
6	Field Husbandry and Weed Control.	5,000 00	5,000 00	5 00	10,005 00	4,975 79	5,029 21
7	Demonstration Trains.....	4,000 00	3,595 71	61 50	7,657 21	6,728 97	928 24
8	District Representatives.....	10,000 00	2,500 00		12,500 00	2,047 34	10,452 66
9	Veterinary Short Courses.		500 00		500 00	265 30	234 70
10	Junior extension work.....		1,180 45		1,180 45		1,180 45
	<i>Elementary Agricultural Education.</i>						
11	Agricultural Instruction in Public, High and Normal Schools ; Household Science.....	17,174 57	25,000 00	223 10		18,451 56	23,946 11
12	School Fairs.....		2,576 16			70 05	2,506 11
		<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
		55,975 85	81,728 48	3,062 51	95,793 01	76,200 96	64,565 88

PROVINCE OF ALBERTA.

Grant of 1917-18.

SUMMARY STATEMENT, April 1, 1917, to March, 31, 1918.

Number.	Classification.	Balance April 1, 1917.	Grant.	Total Credits.	Expendi- ture.	Dr. Balance.	Cr. Balance.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	Schools of agriculture—						
	(a) Maintenance.....	10,265 51	35,000 00	45,265 51	35,826 51		9,439 00
	(b) Equipment..... (Dr.)	1,127 59	2,000 00	872 41	204 19		668 22
2	Demonstration farms.....	608 62	8,000 00	8,608 62	8,374 38		233 74
3	Demonstration trains..... (Dr.)	190 75	5,000 00	4,809 25	6,817 85	2,008 60	
4	Dairying.....	1,907 03	1,500 00	3,407 03	28 00		3,379 03
5	Publicity.....	1,403 01	2,400 00	3,803 01	2,037 54		1,765 47
6	Women's work.....	817 86	4,500 00	5,317 86	5,522 50	204 64	
7	Agricultural representatives.....	293 59	8,500 00	8,206 41	10,579 85	2,373 44	
8	Miscellaneous.....	853 85	65 62	919 47			919 47
	<i>Items from previous Agreement.</i>						
	Provincial Instructors—Dairying....	611 87		611 87	750 00	138 13	
	Interest accrued.....	1,197 90		1,197 90 784 90			1,982 62
		16,053 72	66,965 62	83,804 04	70,141 32	4,724 81	18,387 53

PROVINCE OF BRITISH COLUMBIA.

Grant, 1916-17.

SUMMARY STATEMENT, April 1, 1917, to June 30, 1917.

Number.	Classification.	Balances April 1, 1917.	Refunds.	Total Credits.	Expendi- ture.	Dr. Balance June 30, 1917.	Cr. Balance, June 30 1917.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	Instructors and inspectors in agricul- ture.....	1,836 99		1,836 99	7,557 97	5,720 98	
2	Farm demonstrations and demonstra- tion plots.....	7,324 54	591 48	7,916 02	5,299 47		2,616 55
3	Demonstration in Horticulture.....	4,983 75	31 90	5,015 65	2,844 83		2,170 82
4	Printing and preparing Bulletins....	4,451 30	13 75	4,465 05	1,711 88		2,753 17
5	Agricultural Instruction in Schools..						
6	Miscellaneous.....	924 83		924 83	398 54		526 29
		19,521 41	637 13	20,158 54	17,812 69	5,720 98	8,066 83

Net balance carried forward to Section No. 1, 1917-18. \$2,345.85

PROVINCE OF BRITISH COLUMBIA.

Grant of 1917-18.

SUMMARY STATEMENT July 1, 1917-March 31, 1918.

Number.	Classification.	Balance July 1.	Grant.	Refunds.	Total Credits.	Expendi- ture.	Dr. Balance.	Cr. Balance.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	Instructors and agricul- tural reps.....	2,345 85	3,500 00	208 80	6,054 65	7,170 50	1,115 85	.....
2	Field crop demonstration stations.....		4,000 00	3,860 59	7,860 59	8,507 93	647 34	.....
3	Horticultural demonstra- tion stations.....		3,000 00	21 98	3,021 98	1,300 85		1,721 13
4	Poultry.....		1,500 00	1,087 03	2,587 03	1,638 21		948 82
5	Alfalfa plots.....		500 00		500 00			500 00
6	Silo demonstrations.....		3,000 00	10 00	3,010 00	2,242 89		767 11
7	Drainage.....		1,000 00	47 14	1,047 14	271 98		775 16
8	Seed.....		5,500 00	33 20	5,533 20	1,892 73		3,640 47
9	Dairying.....		3,000 00		3,000 00	1,714 88		1,285 12
10	Bee-keeping.....		*1,250 00	225 00	1,475 00	2,369 12	894 12	.....
11	Field crop competitions...		2,000 00		2,000 00	2,265 27	265 27	.....
12	Boys' and girls' clubs...		1,000 00	11 00	1,000 00	499 95		511 05
13	Fruit packing schools.....		1,000 00		1,000 00	15 00		985 00
14	Market work.....		4,500 00		4,500 00	3,250 06		1,249 94
15	Publications.....		5,000 00	371 08	5,371 08	4,281 97		1,089 11
16	Pathological and entomo- logical investigations...		2,000 00	75 00	2,075 00	1,213 86		861 14
17	Weed investigation.....		1,500 00		1,500 00	141 80		1,358 20
18	Elementary Agricultural Education.....		20,000 00		20,000 00	16,484 28		3,515 72
19	Miscellaneous.....		639 06	1,427 47	2,126 53	1,573 02		553 51
		2,345 85	63,949 06	7,378 29	73,673 20	56,834 30	2,922 58	19,761 48

*Payment of \$4,000 under Section 2 and of \$1,250 under Section 10 withheld pending adjustment.

BRITISH COLUMBIA.

Agricultural Aid Grant, 1912.

April 1, 1916, to August 20, 1916.

April 1, 1916—Balance brought forward	\$606 69	
April 1 to August 20—Expenditure on account of women's institutes.. . . .		\$605 29
Balance carried forward to Agricultural Instruc- tion.. . . .		1 40
	<u>\$606 69</u>	<u>\$606 69</u>

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PROVINCE OF NOVA SCOTIA.

Grant of 1917-18.

SUMMARY STATEMENT, April 1, 1917, to March 31, 1918.

Number	Classification.	Balances April 1, 1917.	Grant.	Refunds.	Total Credits.	Expendi- ture.	Cr. Balance.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	College of Agriculture, interest and sinking fund, science building.....	2,494 27	8,000 00	.....	10,494 27	8,707 60	1,786 67
2	College salaries and maintenance....	131 07	23,000 00	.....	23,131 07	23,114 91	16 16
3	Agricultural Representatives.....	866 51	9,500 00	.....	10,366 51	10,366 23	0 28
4	Short Courses.....	260 55	2,400 00	.....	2,660 55	2,038 34	622 21
5	Dairying	460 49	3,500 00	.....	3,960 49	3,913 68	46 81
6	Poultry	404 37	1,500 00	.....	1,904 37	1,810 43	93 94
7	Bee-keeping.....	49 38	600 00	.....	649 38	568 02	81 36
8	Drainage.....	.....	1,500 00	.....	1,500 00	1,247 12	252 88
9	Soils and fertilizer.....	578 03	1,500 00	.....	2,078 03	2,042 18	35 85
10	Field Crops.....	.....	1,500 00	.....	1,500 00	1,307 81	192 19
11	Fruit Growing.....	0 18	2,000 00	.....	2,000 18	1,938 01	12 17
12	Women's Work.....	837 05	3,000 00	.....	3,837 05	2,197 52	1,639 53
13	Entomological Work	1 34	10,000 00	.....	10,001 34	9,996 39	4 95
14	Agricultural Instruction.....	2,337 99	10,000 00	110 29	12,448 38	8,807 63	3,640 65
15	School Children's Exhibits and Com- petitions .....	.....	2,000 00	.....	2,000 00	1,879 95	120 05
16	Contingencies.....	202 47	1,716 69	.....	1,919 16	1,356 83	562 33
		8,623 70	81,716 69	110 29	90,450 68	81,342 65	9,108 03

PROVINCE OF NEW BRUNSWICK.

Grant of 1917-18.

SUMMARY STATEMENT, April 1, 1917, to March 31, 1918.

Number	—	Balances April 1, 1917.	Grant.	Refunds.	Total Credits.	Ex- penditure.	Dr. Balance.	Cr. Balance.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	Agricultural schools— Equipment and furnish- ings .....	.....	.....	.....	.....	.....	.....	.....
2	Agricultural schools— Salaries	2,364 49	.....	92 00	2,456 49	2,126 66	.....	329 83
3	Agricultural representa- tives .....	.....	13,500 00	2 10	13,502 10	8,685 27	.....	4,816 83
4	Bee-keeping.....	.....	900 00	.....	900 00	796 51	.....	103 49
5	Soils and drainage.. ..	.....	4,000 00	572 55	4,572 55	4,250 85	.....	321 70
6	Horticulture.....	.....	6,500 00	69 55	6,569 55	6,197 83	.....	371 72
7	Short courses.....	.....	1,300 00	.....	1,300 00	365 04	.....	934 96
8	Live stock.....	.....	7,000 00	.....	7,000 00	6,377 16	.....	622 84
9	Dairying.....	.....	4,000 00	18 86	4,018 86	3,242 78	.....	776 08
10	Poultry .....	.....	2,100 00	.....	2,100 00	2,124 67	24 67	.....
11	Fertilizers .....	.....	2,000 00	.....	2,000 00	741 11	.....	1,258 89
12	Entomology .....	.....	1,300 00	.....	1,300 00	1,276 43	.....	23 57
13	Agricultural societies .....	.....	4,000 00	.....	4,000 00	2,655 08	.....	1,344 92
14	Women's institutes	282 95	6,000 00	139 40	6,422 35	6,324 38	.....	97 97
15	Elementary agricultural education.....	1,748 20	9,785 80	22 79	11,556 79	13,275 94	1,719 15	.....
16	School fairs.....	.....	1,725 00	.....	1,725 00	.....	.....	1,725 00
	1916-1917—Contingencies and miscellaneous.....	425 88	.....	.....	425 88	485 82	59 94	.....
		4,821 52	64,110 80	917 25	69,849 57	58,925 53	1,803 76	12,727 80
	Net credit balance...	.....	.....	.....	.....	.....	.....	10,924 04

PROVINCE OF PRINCE EDWARD ISLAND.

Grant of 1917-18.
SUMMARY STATEMENT, April 1, 1917, to March 31, 1918.

Number.	Classification.	Balance April 1, 1917.	Grant.	Refunds.	Total Credits.	Ex- penditure.	Cr. Balance.
		\$ cts.	\$ cts.	\$ cts.	\$ cts	\$ cts.	\$ cts.
1	Buildings account: Equipment and maintenance, agricultural halls....	29 70	2,950 00	348 00	3,327 70	3,195 43	132 27
2	Director and district representatives.		7,000 00	.....	7,000 00	6,629 80	370 20
3	Short courses in agriculture.....		250 00	.....	250 00	108 04	141 96
4	Drainage and soils.....		3,600 00	594 27	4,194 27	3,895 88	298 39
5	Dairying.....		2,400 00	.....	2,400 00	2,398 12	1 88
6	Bee-keeping and fruit-growing.....		300 00	4 40	304 40	244 95	59 45
7	Women's institutes.....	30	3,500 00	100 00	3,600 30	3,322 71	277 59
8	Elementary agricultural education; agricultural instruction in public and high schools, training of teachers, allowances, grants, maintenance of Rural Science Department, Prince of Wales College.....		9,500 00	80	9,500 80	9,027 61	473 19
9	Contingencies, including clerical assistance.....	87	2,249 22	.....	2,250 09	1,899 88	350 21
	Totals.....	30 87	31,749 22	1,047 47	32,722 42	30,722 42	2,105 14

4. VETERINARY COLLEGES.

The number of students, British subjects, enrolled in 1916-17 at the institutions entitled under the Agricultural Instruction Act to participate in the grant of 1917-18 to veterinary colleges was as follows:—

Ontario Veterinary College.. .. .	105
School of Veterinary Science, Montreal.. .. .	62

Based on the above enrolment, the grant was divided as follows:—

Ontario Veterinary College.. .. .	\$12,574 85
School of Veterinary Science.. .. .	7,425 15
	<hr/>
	\$20,000 00

Ontario Veterinary College.—No payment was made to the Ontario Veterinary College during the year, there being sufficient funds on hand from the grant of 1914-15 to meet disbursements.

Financial Statement to March 31, 1918.

Balance on hand, April 1, 1917.. .. .	\$13,736 64
Salaries of lecturers and demonstrators.	\$3,061 30
Laboratory.. .. .	538 18
Printing and advertising.. .. .	999 15
Supplies and incidentals.. .. .	1,989 30
Balance on hand, March 31, 1918.. .. .	7,147 81
	<hr/>
	\$13,736 64

School of Veterinary Science, Montreal.—The grant to this institution for 1917-18, amounting to \$7,425.15, paid in November, 1917, was expended as follows:—

Salaries of teaching staff.. .. .	\$6,510 00
Equipment.. .. .	415 30
Laboratory work.. .. .	499 85
	<hr/>
	\$7,425 15

5. RECAPITULATION OF APPROPRIATIONS UNDER THE AGRICULTURAL INSTRUCTION ACT.

	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.
	\$ cts.	\$ cts.	\$ cts	\$ cts.	\$ cts.
Prince Edward Island.	26,529 85	27,832 81	29,138 28	30,443 75	31,749 22
Nova Scotia.....	54,288 45	61,144 45	68,001 87	74,859 28	81,716 69
New Brunswick.....	44,509 93	49,407 20	54,308 40	59,209 60	64,110 80
Quebec.....	159,482 40	187,409 16	215,310 70	243,212 23	271,113 76
Ontario.....	195,733 32	230,868,83	266,013 64	301,158 45	336,303 26
Manitoba.....	51,730 05	58,075 45	64,421 31	70,767 21	77,113 11
Saskatchewan.....	54,296 29	61,152 31	68,011 04	74,869 76	81,728 48
Alberta..	46,094,95	51,310 41	56,528 82	61,747 22	66,965 62
British Columbia.....	47,334 76	52,799 38	58,265 94	63,732 50	69,199 06
Veterinary Colleges.....	20,000 00	20,000 00	20,000 00	20,000 00	20,000 00
Totals.....	700,000 00	800,000 00	900,000 00	1,000,000 00	1,100,000 00

ONTARIO.

COMPARATIVE STATEMENT of appropriations for agricultural purposes for the years 1915, 1916, 1917, 1918, to October 31.

Service.	1915.	1916.	1917.	1918.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Department of Agriculture—				
Salaries, contingencies, incidentals and miscellaneous.....	98,021 72	87,137 90	119,031 00	250,858 26
Agricultural Representatives	35,917 01	82,299 36	80,600 00	80,600 00
Live Stock Interests—				
Grants, Winter Fairs, Grants to Poultry Association, Horse Shows, Stallion Registration, Sheep experiments, etc., Spring Shows.....	43,079 35	37,314 11	46,450 00	56,693 74
Dairy Interests—				
Grants: Instruction and Inspection, Dairy School..	54,601 40	56,698 72	142,297 00	148,819 95
Agricultural and Horticultural—				
Insurance, Field Crop Competitions and Judges, Exhibitions Special Grants.....	123,867 11	158,216 36	154,750 00	176,750 00
Institute—Farmers' and Women's.....	23,187 08	27,305 31	30,800 00	46,800 00
Fruits Interests—				
Grants, Spraying Assistance, Special Crop Experiments, Horticultural Experiment station, Apiary Inspection Demonstration work.....	49,515 68	46,949 41	55,100 00	75,650 00
Ontario Veterinary College—				
Salaries and Expenses.....	28,989 05	23,231 08	31,229 00	32,450 00
Ontario Agricultural College, Macdonald Institute and Ontario Experimental Farm—Salaries and Expenses	289,315 94	290,405 04	322,092 00	371,409 00
Demonstration Farm, Northern Ontario.....		15,500 41	8,000 00	8,000 00
Totals.....	746,494 34	825,057 70	990,349 00	1,248,030 95

QUEBEC.

COMPARATIVE STATEMENT of Provincial Appropriations for agricultural purposes for the years 1916, 1917, 1918 and 1919, to June 30.

Service.	1916.	1917.	1918.	1919.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Civil Government Salaries and Contingencies.	45,424 05	45,800 00	46,500 00	50,850 00
Agricultural Schools.	30,000 00	30,000 00	30,000 00	10,000 00
Housekeeping Schools.	8,518 00	12,000 00	10,000 00	21,000 00
Agricultural Societies.	105,061 96	115,000 00	100,000 00	120,000 00
Farmers' Clubs or Agricultural Circles, including grant to S. Shore Railway	148,020 10	85,000 00	100,000 00	255,000 00
Council of Agriculture	2,272 68	3,000 00	3,000 00	3,000 00
Horticultural and Agricultural Societies, Montreal and Provincial.	1,000 00	1,500 00	1,500 00	1,000 00
Veterinary Instruction.	6,500 00	5,500 00	5,500 00	6,000 00
Dairying	94,451 64	97,000 00	99,000 00	
Dairy Factory Inspection.		20,000 00		144,000 00
Provincial Laboratory.	4,000 00	2,000 00	2,000 00	4,000 00
Lectures on Agriculture.	3,927 21	9,000 00	9,000 00	
Fruit Growing	4,605 33	5,000 00	5,000 00	6,000 00
Poultry Raising	2,126 47	3,000 00	3,000 00	6,000 00
Journal of Agriculture	26,624 30	27,000 00	27,000 00	27,000 00
Agricultural Merit.	3,293 40	3,500 00	3,500 00	6,000 00
Exhibitions.	30,500 00	32,000 00	30,000 00	34,000 00
Miscellaneous.	35 00	100 00	100 00	
Totals.	516,365 14	496,400 00	475,100 00	743,850 00

MANITOBA.

COMPARATIVE STATEMENT of Expenditure of Provincial Appropriations for Agricultural purposes for the years 1915, 1916, 1917 and 1918, to November 30.

Service.	1915.	1916.	1917.	1918.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Department—Salaries	14,555 00	12,522 26	14,600 00	13,316 00
“ Office Expenses	1,727 81	1,990 39	2,000 00	1,500 00
Agricultural Societies and Farmers' Institutes.	48,145 78	45,787 69	108,050 00	122,495 00
General Agriculture.	9,799 69	23,429 90		
Grants to Live Stock Associations, Winter Fairs, Exhibitions and Societies.	5,707 72	12,895 82		
Manitoba Agricultural College—			191,370 00	205,135 00
Salaries	103,709 95	101,369 45		
Maintenance.	65,791 83	75,246 52	22,800 00	20,100 00
Publicity				2,560 00
Birtle Demonstration Farm			5,000 00	2,000 00
Miscellaneous				
Totals.	249,437 78	273,242 04	343,820 00	367,166 00

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SASKATCHEWAN.

COMPARATIVE STATEMENT of Provincial Appropriations for agricultural purposes for the years 1915, 1916, 1917 and 1918, to April 30.

Service.	1915.	1916.	1917.	1918.
Department—Salaries and general expense.....	66,347 93	40,795 00	34,830 00	35,130 00
General agricultural interests, Agricultural Societies, Provincial Organization, Grants and Contingencies.	68,549 34	67,600 00	67,600 00	63,000 00
Live Stock Industry.....	35,636 95	30,300 00	32,700 00	50,000 00
Dairy and Poultry Industry.....	87,986 43	71,100 00	16,300 00	15,200 00
Agricultural Statistics and Publicity.....	26,635 82	26,900 00	21,600 00	18,000 00
Bacteriological Laboratory.....	8,040 88	8,400 00	.....	.....
Weed Control, Seed Inspection, Exhibition.....	18,272 69	8,900 00	10,000 00	11,300 00
Game Protection.....	.....	10,100 00	11,200 00	14,160 00
Bureau of Labour—Farm and domestic labour and factory inspection.....	7,594 60	9,600 00	10,100 00	11,700 00
Miscellaneous Services—Vital statistics, Natural History Scholarships, Brands, etc.....	21,235 31	9,100 00	1,100 00	500 00
Totals.....	340,299 95	282,795 00	205,830 00	218,990 00
Less Revenue..	104,283 41	95,500 00	37,000 00	.....
	236,016 54	187,295 00	168,830 00	.....

ALBERTA.

COMPARATIVE STATEMENT of Provincial Appropriations for agricultural purposes for the years 1915, 1916, 1917 and 1918.

Service.	1915.	1916.	1917.	1918.
Civil Government.....	\$ 48,329 94	\$ 49,520 00	\$ 54,940 00	\$ 45,480 00
Live Stock—				
Live stock and agricultural institutes and associations; fat stock shows; destruction of wolves; stock inspection; brands and brand book; grants to live stock associations; spring stock show. . .	47,736 83	46,100 00	52,700 00	62,500 00
Fairs and Exhibitions—				
Official judges; production of pure seed grain, and Seed Fair, Fairs Association, agricultural societies	117,226 18	121,500 00	.....	136,600 00
Poultry—				
To encourage poultry industry; grant to Poultry Association.....	8,300 37	8,200 00	8,700 00	.....
Dairying—				
Advances to creameries; to encourage dairy work..	249,851 53	19,500 00	19,500 00	38,594 60
Demonstration Farms—				
Administration and operation.	70,231 95	65,000 00	65,000 00	66,000 00
Schools of Agriculture—				
Operation; agricultural instruction; scholarships..	20,503 11	20,500 00	20,000 00	20,000 00
Statistics; protection of game; prairie fires.....	45,371 79	32,500 00	36,000 00	57,310 70
Grants—				
United Farmers' Irrigation Association; destruction of noxious weeds; Natural History Society.....	27,640 66	30,000 00	35,000 00	25,000 00
Bacteriological and pathological work.....	9,000 00			
Sundries and contingencies.....	1,694 19	1,000 00	1,200 00	
	\$ 645,786 55	\$ 393,820 00	\$ 406,040 00	\$ 451,485 30

BRITISH COLUMBIA.

COMPARATIVE STATEMENT of Provincial Appropriations for agricultural purposes for the years 1915, 1916 and 1917, to March 31, 1918.

Service.	1915-16.	1916-17.	1917-18.
	\$ cts.	\$ cts	\$ cts.
Salaries—Agricultural Branch, Department of Finance and Agriculture	62,919 70	73,496 00	65,752 00
Agricultural Associations.	16,709 33	30,000 00	20,000 00
Board of Horticulture.	318 85	500 00	500 00
Grants to various associations	4,322 63	5,250 00	5,750 90
Grants to students; compensation for cattle; services and expenses, outside; miscellaneous, weed suppression ..	77,336 31	67,000 00	58,000 00
Panama Exposition	7,322 92		
Fruit Work—Fruit cooling and storage, fruit exhibitions, fruit packing schools, inspection nursery stock, fruit growers' associations demonstration orchards	36,649 76	43,750 00	33,500 00
Farmers' Institutes	18,108 45	20,000 00	15,000 00
Women's Institutes		7,500 00	7,500 00
Poultry Association grant ...	5,213 60	2,500 00	
Dry farming experimental plots			2,000 00
	233,898 34	249,996 00	208,002 00

NOVA SCOTIA.

COMPARATIVE STATEMENT of Provincial Appropriations for agricultural purposes for the years 1915, 1916, 1917, 1918, to September 30.

Service.	1915.	1916.	1917.	1918.
	\$ cts	\$ cts.	\$ cts.	\$ cts.
General Agriculture—Department salaries and expenses	14,415 64	14,747 58		
Assistance in dairying	1,849 69	1,783 87		
Entomological inspection	2,938 06	3,910 31		
Drainage	400 93	12 39		
Exhibitions	10,484 08	5,540 17		
Field crop competitions	936 07	1,022 71		
Live stock improvement				
Meetings	406 50	89 40	36,000 00	38,000 00
Model orchards	596 45	500 01		
Printing and advertising	212 60	490 92		
Miscellaneous	448 45	616 58		
Fruit growers and county associations	1,200 00	1,450 00		
Stallion enrolment.	142 23	240 95		
Assistance of poultry	423 20	632 65		
Advertising fruit in Great Britain		781 95		
Agricultural College	18,300 00	19,000 00	19,000 00	
College farm	14,700 00	15,000 00	15,000 00	37,000 00
Agricultural societies	14,710 76	14,490 00	15,000 00	15,000 00
Total	82,164 66	84,309 95	85,000 00	90,000 00

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NEW BRUNSWICK.

COMPARATIVE STATEMENT of Provincial Appropriations for agricultural purposes for the years 1915, 1916, 1917 and 1918, to October 31, 1918.

Service.	1915.	1916.	1917.	1918.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Salaries and expenses—Department.....	7,945 44	9,914 76	9,558 00	10,916 66
Agricultural Societies.....	17,000 00	17,000 00	18,000 00	19,000 00
Live Stock Industries—Dairying....	6,477 85	5,830 96	7,200 00	12,100 00
Farmers' Institute.....	738 05	285 42	600 00	.....
Horticulture.....	1,997 26	1,499 32	2,500 00	1,200 00
Poultry Raising..	1,245 57	1,417 52	2,000 00	1,000 00
Crop Competitions—Seed Fairs.....	3,398 16	4,878 71	4,400 00	5,200 00
Miscellaneous.....	1,944 11	1,389 81	2,125 00	3,200 00
Brown Tail Moth, etc.....	3,754 45	3,370 79	2,912 00	3,300 00
Bonus Mud Dredges.....	519 90	.....	500 00	1,700 00
Bonus Clover Hullers.....	600 00	.....	.....	500 00
Limestone crusher and power.....	1,895 00	275 40	500 00	500 00
Bonus to Wheat Mills.....	.....	2,500 00	3,000 00	5,000 00
	47,515 79	48,362 69	53,295 00	63,916 66

PRINCE EDWARD ISLAND.

COMPARATIVE STATEMENT of Expenditure of Provincial Funds for Agriculture.

	1915.	1916.	1917.	1918.
	To Dec. 31.	To Dec. 31.	Appropriations.	Appropriations.
	cts.	\$ cts.	\$ cts.	\$ cts.
Farmers' Institutes.....	1,653 00	2,077 50	2,070 00	2,070 00
Field Crops, Horticulture, Dairying and Poultry....	939 27	2,562 28	3,000 00	3,000 00
Exhibitions, Association Grants and Live Stock Judging.....	10,558 30	8,865 50	8,780 00	.....
Miscellaneous Department Expenses.....	10,785 76	2,772 73	5,850 00	5,850 00
Totals.....	23,936 33	16,278 01	19,700 00	10,920 00

